



Drawn and Etched by J. L. Morrison.

Native of Nukahiva

Published June 1 1843 by J. Murray, Albemarle Street

Rutherford
G
420
K94 E5
1813

VOYAGE ROUND THE WORLD,

IN THE

YEARS 1803, 1804, 1805, & 1806,

BY ORDER OF

HIS IMPERIAL MAJESTY ALEXANDER THE FIRST,

ON BOARD THE SHIPS NADESHDA AND NEVA,

UNDER THE COMMAND OF

CAPTAIN A. J. VON KRUSENSTERN,

OF THE IMPERIAL NAVY.

IN TWO VOLUMES.

TRANSLATED FROM THE ORIGINAL GERMAN

By RICHARD BELGRAVE HOPPNER, Esq.

VOL. I.

Les Marins écrivent mal, mais avec assez de candeur.—DE BROSSÈS.

London :

Printed by C. Roworth, Bell-yard, Temple-bar;

FOR JOHN MURRAY, BOOKSELLER TO THE ADMIRALTY AND THE
BOARD OF LONGITUDE, 50, ALBEMARLE-STREET.

1813.

LIBRARY OF THE UNIVERSITY
OF ALBERTA

TRANSLATOR'S PREFACE.

IN offering to the public a translation of "A Voyage round the World, by Captain Krusenstern," the translator is not animated by any confident feelings of the success of his labours. When a part of the work first arrived in this country from Berlin, where it was reprinted from the original, it was put into his hands, rather for the purpose of his endeavouring to find a proper person to undertake the translation, than of any expectation that he should himself engage in the task. Failing, however, in this endeavour, and having seen, in the mean time, a favourable and interesting account of the work in one of those periodical publications, which, of all others, are best calculated for the general diffusion of knowledge, and one which, in its character and public estimation, ranks second to none,* he was prevailed on to attempt it himself.

The motto which Captain Krusenstern has prefixed to his book, "*Que les marins écrivent mal, &c.*" is certainly exemplified in his own instance. The characteristic feature of the work is that of accuracy, rather than elegance of description. An uncouth stile, and a cold precision of expression, must ever

* Quarterly Review, No. XII. Art. II.

preclude the author from ranking with some of our circumnavigators who, in their descriptions and narratives, have displayed a warmth of colouring, a taste and feeling, worthy of the wonderful talents which insured the successful execution of new and adventurous voyages. The translator felt, however, that any improvement which might bring it nearer to other works of a similar nature, could only be effected by a considerable alteration in the stile, and the infusion of some little warmth and sentiment into those descriptive parts which would admit of it without injury to the sense, or a departure from the truth. But such a step would have been to assume a licence which he conceived he was by no means warranted to take; and, as his aim was to produce a correct and not an amended copy, he had no alternative but to follow the original, with that precision which he conceives to be absolutely necessary in translating a work of this nature, and on which, indeed, its value so mainly depends.

In attempting this apology for the stile of the work, as far as he is himself concerned, the translator is far from wishing to detract from that merit which is unquestionably due to Captain Krusenstern. The care and precision with which he has executed his own nautical remarks and observations, and examined and compared those of his predecessors, entitle him to great praise. His unremitting attention to the preservation of the health of the crews, composed entirely of men unused to a tropical sun, the means which he employed for this purpose, and the success which attended them, are not less creditable to his judgment than to his humanity.

TRANSLATOR'S PREFACE.

v

In the narrative of a voyage not undertaken professedly with the view of making new discoveries, our curiosity is less strongly excited than in one where discovery is the primary object. Yet the voyage of Captain Krusenstern is not deficient even in this respect. His account of Nukahiwa, and its fine race of inhabitants, is by no means uninteresting, and confirms, in most respects, that given of them by his predecessors: his naming it one of the "Washington Islands," because first discovered by the master of an American vessel, is, perhaps, objectionable, as Nukahiwa is just as much one of the group long known as the *Marquezas*, as *Corvo* is one of the *Azores* or *Western* islands. Here he met with an English sailor of the name of *Roberts*, who had received the king's sister in marriage, and who found himself so comfortably situated among the islanders, that Captain Krusenstern could not prevail on him to leave them.*

* He has however since left them, as appears by the following letter, addressed to Mr. Hare, and dated at Calcutta, December 11th, 1811:

TO JAMES HARE, Esq.

SIR,

I BEG leave to state to you the outlines of my narrative, viz.—In November, 1797, I sailed from London, bound round Cape Horn; stopped at Spithead till early in January, 1798, at which period and in three weeks we reached the island of St. Jago; stopped a few days, and proceeded to Rio de Janeiro, at which place we stopped about twelve or fourteen days; we then proceeded on our voyage towards Cape Horn, which we doubled some time in June, 1798.—We were near six months at the *Gallapagos* isles, when we took our departure along the coast of California, in company with two ships, the *Butterworth* and *Liberty*, both of London. In the latitude of 17° N. we experienced a very heavy gale at midnight; the *Liberty* was never seen after, the *Butterworth* lost her main-mast. In consequence of this unlooked-for misfortune, we made for the *Marqueza* isles, situated in 9° 58' S. latitude, and about 158° W.

His short account of the Japanese is, as every thing must be which relates to that curious people, highly interesting; and his stay on the northern part of Jesso afforded him the means of collecting considerable information respecting the harmless inhabitants of this secluded part of the globe. His observations made in the Tartarian Sea, and partial survey of the coast of Saghalin, or Tchoka, are creditable to his talents, assiduity, and perseverance, as a navigator employed on making

longitude.—Through some occurrences, I became an inhabitant at St. Christiana; here I resided near a year, when I went over to another isle, distant about three leagues; here I passed a few months in speculation, but my slender education debarred me from many useful points to society; at length I took my departure with a friend in his double canoe, bound to Nukahiwa, a distance of about thirty-five leagues. At this isle I had my different turns of fortune; my friend the king was very partial to me, and I did every thing that was just to merit his favour. I headed his warriors for four years. At length he gave me his own sister, Ena-o-ae-a-ta, to be my bride, as a small token of his esteem; I have ever since thought it a great one. At length I took my leave, in February, 1806, on board the Lucy, of London, bound to Port Jackson. In six days we arrived at Otaheita. Here I found twelve missionaries: my wife being pregnant with her second child, I stopped at this place, March 8th, 1806. I remained here about eighteen months, at which time arrived Captain Dalrymple; I went on board of him as pilot; I took his ship among the Ladrone isles, and in one month we returned to Otaheita, got our wood, water, &c. and departed for the Pheacus isles, and from thence for New Zealand, at which place we got a cargo of spars, and took our departure for Penang, at which place we arrived in March, 1808. I staid at this place twenty-three months; my employer being dead, I took my passage in February, 1810, for Bengal; we arrived March 17, 1810.

This, good Sir, is the outline of my voyages and travels, if this should answer your desire.

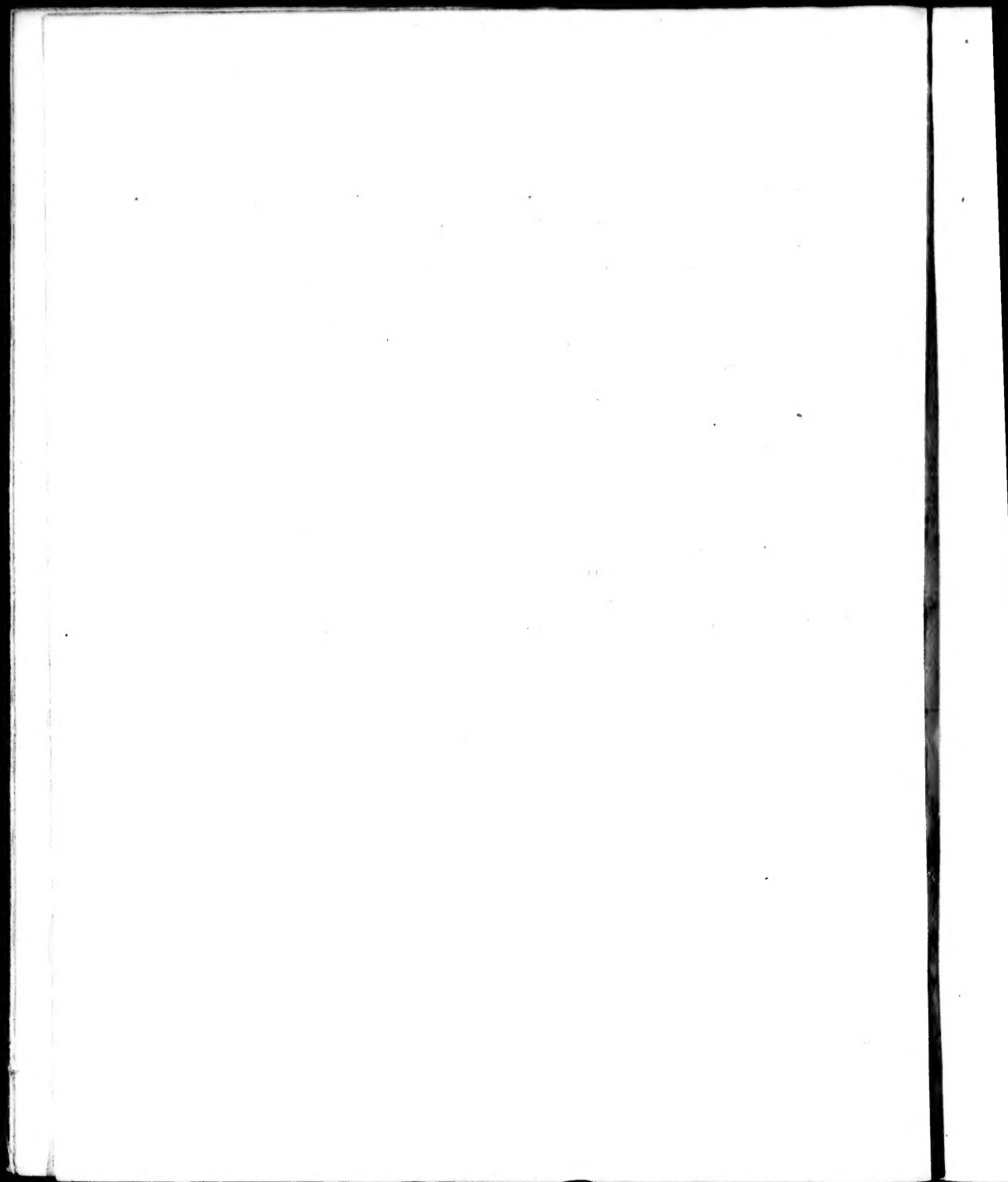
Sir,

I remain, yours, &c. &c.

E. ROBERTS.

new discoveries. On the whole, the translator is of opinion that the work of Captain Krusenstern will not be found, even in England, undeserving of some portion of that reputation which it seems to have gained on the continent of Europe.

It is right to observe, that it has not been thought necessary to increase the size of the present translation, by the addition of various papers on subjects of Natural History, &c. contained in the third volume, especially as it appears that Dr. Langsdorf, one of the naturalists, is about to publish a particular account of whatever occurred during the voyage, new or interesting, in his department. Nor has it been deemed of importance to wait the arrival of the plates which are meant to embellish and illustrate Captain Krusenstern's voyage. A set of them has indeed been seen by the translator, who can venture to say that, from the indifferent manner in which they are executed, and the very little information which they convey, the book has suffered no defect from the want of them.



TO
HIS IMPERIAL MAJESTY
ALEXANDER I.

MOST GRACIOUS EMPEROR,

THE first Voyage of the Russians round the globe, which, by the command of Your Imperial Majesty, I have had the good fortune to direct, deserves particular notice in the annals of the Naval History of Russia. Your Majesty has been graciously pleased to permit me to publish the account of this successful undertaking ; and I now venture to lay my publication at the foot of your Imperial Throne. I trust, that the simple narrative of a seaman may not be found altogether undeserving the august name of the Gracious Monarch which I am allowed to place at its head : a favour which affords a new proof to me, that, from the commencement to the end of this voyage, I have had the happiness to obtain Your Imperial Majesty's approbation.

(1)

With sentiments of the highest respect, and animated by
the warmest feelings of gratitude, for the numerous proofs of
Your Imperial favour,

I remain,

MOST GRACIOUS EMPEROR,

Your Imperial Majesty's

Most dutiful and devoted Subject,

KRUSENSTERN.

INTRODUCTION.

General Observations on the State of Russian Commerce during the last Century—Sketch of the Russian Voyages and Discoveries in the great Northern Ocean—Voyages of Captains Behring, Tschirikoff, Spanberg, Walton, Schelling, Synd, Krenitzin, Lowascheff, Laxmann, Billings and Sarytscheff—Origin of the Russian Fur Trade—Short Account of it—Rise of the Russian American Company—Its complete Establishment and Confirmation by the Government—Original Motives for the present Voyage.

THE discovery of Kamtschatka in the year 1696, and that of the Aleutic islands in 1741, occupy no small place among the great events which have occurred in Russia since the reign of Peter the Great. Both are of importance, from their extensive, although only recent influence upon the trade of Russia, and from the turn which they have given to the commercial spirit of her inhabitants. The possession of Kamtschatka, and of the Aleutic islands, contributes, perhaps, to rouse Russia from that state of slumber in which the policy of the commercial nations of Europe has ever, and with too much success, endeavoured to lull her; nor do they witness, without uneasiness, the first attempts of the Russians to shake off the yoke of their masters, and to open a field from which, although their own property, they have hitherto derived no great advantage. The inexhaustible springs and incentives to commerce which Russia possesses, are not unknown to any one: but there are obstacles

which render it difficult that she should ever become a trading nation ; obstacles which several writers have even represented as insurmountable, although they are not of that nature to warrant a doubt of the possibility of removing them. Let the monarch only express his pleasure with regard to them, and the most difficult are already overcome.

It was certainly one of the wisest measures of the immortal Peter, whose actions almost invariably bear the stamp of a deep politician, and evince the keen penetrating eye of the creator of Russia, to draw foreign merchants into that country, in order to bring her trade into a fair line of action. The character of the merchant in former times was very considerable, owing to the active trade carried on by Russia ;* but it had, nevertheless, lost a great deal of its respectability at the commencement of the preceding century. The principal merchants were then almost entirely ignorant of the relations of foreign commerce, which Peter was desirous of introducing into his states, together with a marine : and they therefore stood in need of instructors, by whose means they might acquire a knowledge of the science of trade, to them so perfectly new, and without which any undertaking of consequence could not be expected to succeed. It was, moreover, necessary, in order that any prejudices which

* The Russian wholesale dealers (Gosti) formerly enjoyed several privileges which they have gradually lost : they were employed on embassies, and invited to the tables of princes ; their demands were preferred to those of other creditors ; they were free from almost all imposts, were not subject to have troops billeted on them, nor required to swear themselves, but might make oath through the means of their servants ; and no one could judge them except the Czar, or a Bojar expressly appointed for the purpose, &c.

might exist on the part of the nobility against the character of the merchant, should be extinguished, to invite into the country, foreigners who, without being nobles themselves, might attract the attention of the emperor, and even command his esteem. In a word, it was requisite again to ennoble the merchant in the eyes of the nation; and Peter the Great began this undertaking, to which his successors have all more or less contributed. Several circumstances have delayed the complete success of this desirable object, notwithstanding the most anxious wish of the Russian sovereigns to extend the commerce of their subjects; but the merchant's character has always increased in consideration. It is reserved for the present enlightened government to put the last hand to the improvement of the people which Peter the Great set on foot: and it is now time for us to throw off the yoke imposed on our commerce by foreigners, who, having acquired wealth at the expense of our country, quit the empire in order to spend it in their own; and in this manner withdraw from the state that capital which it would preserve, if the native possessed any means by which his energy and patriotism might be animated and employed to the advantage of his country. This energy, this patriotism, they can only be inspired with, in a country which like Russia depends on the will of a single person, by its ruler; and in this the government of our present excellent monarch, who employs his power solely for the advantage of his subjects, and gives daily proofs of his humanity and zeal for the welfare and reputation of his country, is particularly to be distinguished.

For the last century the active trade of Russia has been in the hands of foreigners; and a long time must have elapsed before,

even by adopting the most efficient measures, a part of it only could have been recovered from them, if the possession of Kamtschatka, and of the adjoining islands, as well as of a large portion of the north-west coast of America, the trade with which has been entirely in the hands of the north-eastern inhabitants of Russia, did not now enable those of the west to effect this, much sooner than before appeared probable: measures which are become by much too important for the present government not to avail itself of them to the attainment of this great object.

Although I cannot suppose any of my readers ignorant of the history of the Russian voyages and discoveries in the northern ocean, nevertheless a short sketch of them may not be here very much misplaced.

As early as the year 1716, a ship sailed from Ochotzk to Kamtschatka by order of Peter the Great, and made the first attempt to institute a communication by water between the main land and this peninsula, which since that time has always been preferred to the difficult and tedious intercourse by land. By his orders the Kurile islands were likewise examined during the years 1711 and 1720; and shortly before his death, which took place in 1725, he set on foot the first Kamtschatka expedition, as it was called, to the command of which Behring was appointed. It could not escape his penetrating observation, that these distant regions would at some period prove extremely advantageous to his empire; and he therefore wished to obtain an accurate account of them. The decision, too, of the then pending question, how far America was distant from Asia,

a question the emperor had already been entreated to inquire into during his residence in Holland in 1717, and upon which the Parisian Academy of Sciences, of which he was a member, had made a representation to him, occupied him constantly. Behring, accompanied by Lieutenants Tschirikoff and Spanberg, made two voyages: the first, in 1728, to the northward as far as Cape Serdze Kamen, in latitude $67^{\circ} 18'$ N. which he incorrectly held to be the extreme point of Asia; and the second in the following year to the eastward in search of America, which however he did not find. The object of these two voyages was therefore frustrated. The Empress Anna hereupon ordered a similar voyage to be undertaken, and the discovery of the Aleutic islands and of the coast of America rendered this of importance to the future commerce of Russia; although much greater results might have been expected, the preparations for it lasting nine years, and having occasioned an enormous expense, besides that by the conveyance of the materials for the construction of the ships to Ochotzk, many entire villages of Siberia were completely annihilated. Behring was again selected as chief of this expedition, and Tschirikoff commanded the other ship. In the year 1741 these two navigators commenced their voyage. Stetter accompanied Behring as naturalist, and Delisle de la Croyere went with Tschirikoff as astronomer to the expedition. The latter discovered the coast of America in the 56th degree of latitude; Behring, who was separated from his companion in a storm, saw it in latitude $58^{\circ} 28'$.* On his voyage back to Kamtschatka

* Müller's Collection of Russian Voyages, 3d vol. page 198..

Behring's ship was driven on an island, which now bears his name, and where he shortly afterwards died.*

In the years 1738 and 1739, Lieutenants Spanberg, Walton, and Schelting sailed to the Kurile islands and to Japan. During their second voyage in 1739, they were separated in a gale: they touched upon different parts of the east coast of Japan; Spanberg and Schelting in latitude $38^{\circ} 41'$ and $38^{\circ} 25'$; and Walton, who fell in with the land in $38^{\circ} 17'$, kept along it as far as $38^{\circ} 48'$ †. Spanberg examined the Kuriles as far as Jesso or Matmay, and on his return published a chart of them containing twenty-two islands, of which, owing to the incorrectness of the draught, few can now be recognized. In 1741 and 1742, Spanberg and Schelting again sailed in order to determine whether Japan and Kamtschatka are, or not, under the same meridian; for it was doubted whether Spanberg and Walton had really seen the coast of Japan, and had not confounded it with that of Corea; but nothing was effected in this second voyage. Spanberg's ship sprung a leak, and he immediately returned: his companion Schelting explored the mouth of the Amur; but afterwards, in ascertaining the difference of longitude between Kamtschatka and Japan, which Spanberg and Walton had laid down, it was proved, that in their first voyage they really did reach the coast of Japan. Since Spanberg's time, until the Japanese Kodojee was sent

* I do not here allude to the voyages, which, although they formed part of the plan of this expedition, were not immediately connected with the voyages of discovery in the great northern ocean.

† Müller's Collection of Russian Voyages. Third volume, pages 163—167. —

away, and conducted by the younger Laxmann, in the year 1792, to his own country, by orders of the Empress Catharine, the Kurile islands and Jesso have been repeatedly visited by Russian merchants, but without any positive advantage accruing from their visits either in a scientific or commercial point of view.

In the years 1743 and 1744, the coast from Ochotzk to Kamtschatka, was examined by Lieutenant Chmiteffskoy.*

In 1764, Lieutenant Synd, of the Royal Navy, was sent by order of the Empress Catharine from Ochotzk, on a voyage of discovery between Asia and America, and returned in 1768. In this voyage he discovered the island called Matwey,† and the great island of St. Laurent, called by Cook Clerke's island.‡

In 1768, Captain Krenitzin and Lieutenant Lowascheff sailed from Nischney Kamtschatsk, in order to examine the Aleutic islands, and to determine their astronomical situation.

* Introduction to Sarytcheff's voyage.

† Cook's Cape Upright, in latitude $60^{\circ} 17'$ and $187^{\circ} 30' E.$, is probably in the island of Matwey, called by Cook Gore island.

‡ In a chart of Synd's Voyage, in Coxe's well-known work upon the Russian Discoveries, there is, between the 61st and 64th degrees, well to the south of Behring's straits, a group of islands said to have been discovered by Synd, whose course is laid down as passing between them. Cook's and Sarytcheff's voyages prove, however, that this group does not exist, and is of the same origin as the islands of St. Macarius, St. Stephen, St. Theodore, and St. Abraham, which have long since been omitted from the charts. Probably these islands are that of St. Laurent, which Synd mistook for a group instead of being but one island.

They both executed this commission very carefully in 1768 and 1769: but Krenitzin, on his return, had the misfortune to be drowned in Kamtschatka.

In 1785, a fresh expedition was set on foot, the command of which was entrusted to Billings, an Englishman. Of this voyage, which was completed in 1796, two accounts have lately appeared in print; the first, written in English, by Captain Billings's secretary, Sauer; the other, compiled by the present Vice-admiral Sarytscheff, in Russian, contains all that is important, and the nautical details of the expedition. As these voyages are in every body's hands, I shall not express my opinion upon their merits: but it appears to me, that the expectations which the voyage gave rise to, have not been at all fulfilled, and are not in the least equal to the enormous exertions and expenses it occasioned to the government during the ten years it lasted. Among the officers of the Russian navy, there were many who would have conducted the expedition much more creditably than the Englishman: every thing useful that was effected by it, was done by Captain Sarytscheff, who alone possessed any extraordinary scientific knowledge of his profession; and without his exertions, which were employed principally in ascertaining the astronomical situation of the different places, in surveying and describing the islands, coasts, harbours, &c. Russia, in all probability, would not have had a single chart by the leader of the expedition.

The same effect which Captain Cook's third voyage produced upon the speculative and enterprising spirit of the English merchants, who, soon after the return of his ship, began

to visit the north-west coast of America for the valuable seal skins, (which his stay among the Chinese at Macao had taught them to appreciate,) had been occasioned among the Russian merchants forty years sooner, by the discovery of the Aleutic islands and the north-west coast of America, by Captains Behring and Tschirikoff. Since that period, the Russian merchants made several voyages thither, at their own expense, in order to procure all kinds of furs, but chiefly the seal skins, which they sold to great advantage upon the Chinese frontier. In this manner they opened a trade, which proved so highly advantageous, notwithstanding the little encouragement afforded them, and the almost incredible difficulties, calculated to deter every one from a continuance in this commerce who had not the same enterprising spirit and moderate expectations as the Russians, that the number of ships employed in it increased from year to year. I do not enter into the detail of these voyages, as an account of them is given in Pallas's *New Northern Supplement*, and Coxe's *Description of the Russian Discoveries*; but shall content myself with observing, that they have been continued without interruption since the year 1745, and always very much to the advantage of those who undertook them. Every species of fur, but particularly the seal skin, has become an article of indispensable necessity to the delicate Chinese. With the least change of air, they immediately alter their dress; and even at Canton, which is under the tropic, they wear furs in the winter. The trade carried on by the Russian merchants might have been attended with infinitely greater advantages, had it been supported by the government, as they might then have built better ships, and have entrusted them to more able commanders.

As they were entirely deficient in the latter, they generally lost one ship in three every season: notwithstanding which, the number of ships sent to procure furs increased to such a degree, that, although other nations, for instance the English, Americans, and even Spaniards, began to take a share in this lucrative commerce, there were frequently twenty ships fitted out in the Russian ports in the course of the year. This extraordinary increase was attended with many evil consequences; and it is very probable, that had it not been for the merchant Schelikoff, who may be considered as the founder of the present American Company, this trade must have fallen to the ground, owing to the bad measures pursued by those who participated in it. Every vessel destined for it belonged to a separate proprietor, who spared neither the natives of the Aleutic islands, who were invariably ill-treated, nor the animals themselves which they hunted; in short, without any consideration for the future, they merely hastened to collect a cargo, and to return to Ochotzk. The valuable seals, and other wild beasts, whose skins were so profitable to these insatiable hunters, would soon have been completely extirpated had this general chase been continued: and the trade would have then ceased of itself, or at least have been suspended for some years. Convinced of the extreme necessity of putting a stop to this destructive plan of proceeding, Schelikoff took considerable pains to form the different partakers of this trade into a company, in order, afterwards, to conduct it with prudence and precaution, upon some plan that might prove advantageous to all parties. All his efforts to effect this were, for a long time, in vain, until, in 1783, he succeeded in joining company with the Golikoffs. They advanced their capital, fitted out several ships, which the enter-

prising Schelikoff commanded in person; formed an establishment on the island of Kodiak, which is even now the chief factory of the American Company, for which it is particularly well calculated, by its central situation between the Aleutic islands and Kamtschatka to the west, and the coast of America to the east; and during several years they continued this lucrative trade in conjunction, by which they acquired considerable wealth.

The success of this connection induced several merchants to unite like Schelikoff and the Golikoffs, and in this manner was laid the ground-work of the present American Company; a name which it had assumed even with the union of their two firms. The trade was now conducted by the former for the general benefit of the whole, and factories, protected by forts, were established on almost all the Aleutic islands. The Company's chief establishment was at Irkutsk, a town which, by its situation, facilitates the connection of east and western Russia: but although it had now increased to a considerable extent, the company had not received the smallest proof either of the attention or support of the government, and its trade appeared to be rather tolerated than confirmed; nor did its existence rest on any firm basis. As the irregular manner in which it was carried on, and the unjust and often cruel conduct of the Russian merchants to the natives of the American islands, (a circumstance now very generally known,) had drawn great and powerful enemies upon them; the Emperor Paul, who then occupied the throne, determined to put a stop to the Company and the trade at the same time: and this determination would have infallibly been carried into effect but for the interference of M. Von Resanoff, who was subsequently appointed ambas-

sador to Japan. Resanoff had married Schelikoff's daughter, and acquired with her a considerable property, which consisted entirely in bills, whose value depended on the successful continuation of the American Company. By great activity and a combination of measures, he succeeded in rendering the emperor so favourable to the new-established company, that he rejected the applications for its deposition; formally confirmed it in 1799; and gave it considerable privileges. Its residence was removed the same year from Irkutsk to St. Petersburg, and the trade at length assumed a flourishing appearance. Measures were adopted, the advantages of which were sufficiently proved by the success attendant upon them: the Company sent an Englishman to America, who was not only a shipwright but a seaman; and began to provide its officers with the best charts, voyages, the most necessary nautical and astronomical instruments, and such books as are relative to navigation.

It is, however, only since the reign of the present emperor, (who, immediately upon ascending the throne, interested himself very much in behalf of the Company, of which he became a member, and by his example induced many of the nobility to do so likewise,) that its duration, under the superintendence of the minister Count Romazoff, has been actively and zealously employed in giving a new form to this so long neglected branch of commerce. They naturally began by supplying their colonies, which being but newly established, and, from their situation in so poor and inhospitable a country, must soon have sunk into nothing without support, with every necessary, as cheap and as regularly as possible. Among these necessities, even bread must be reckoned: for there is no corn

grown either in the Aleutic islands, or on the coast of America. The factories were placed in a better state of defence, and it was necessary to look to the construction of better ships, and to provide them with good rigging, anchors, and cables, upon which the safety of a vessel so much depends, and likewise to furnish them with skilful and experienced captains and crews. This, however, could only be effected by a direct communication by sea between Russia and her American colonies: and hitherto they had always been provided with necessaries through Takutzk and Ochotzk. The great distance, and the extreme difficulty of conveying goods and necessaries, for which purpose upwards of 4000 horses are annually employed, increased the price of every article, even in Ochotzk, beyond measure. For instance, at the cheapest times, a pud of rice, which in the eastern provinces of European Russia generally costs only half a ruble, was sold at eight rubles; a measure of brandy at twenty, or even forty and fifty rubles; and other articles in the same proportion; and frequently these goods, after travelling half way or more, were plundered, and only part of them reached Ochotzk. The conveyance of anchors and cables appeared almost impossible; and, owing to the want of them, such measures were frequently resorted to as could not but be attended with the worst consequences. The cables were cut into pieces of seven or eight fathoms in length, and spliced together in Ochotzk; and the anchors were, in like manner, carried there in pieces and afterwards joined again. Difficult and expensive as was this mode of conveyance to Ochotzk, it was equally so, and the risk much greater, from thence to the islands and the coast of America. The wretched construction of the vessels; the ignorance of most of their commanders; and

the navigation of the stormy eastern ocean, which throughout the year was attended with danger to vessels of this description, were the causes of many of them, together with their valuable and necessary cargoes, being lost almost every year;* and it now appeared absolutely necessary, if this trade were to be continued with advantage, and in future to be extended, that ships should be sent to the east sea round Cape Horn or the Cape of Good Hope, to the north-west coast of America: and in 1803 the first attempt to do this was resolved upon.

To the public it must be a matter of indifference who was the first person to propose this voyage; nevertheless I may be allowed to mention briefly a few circumstances which preceded the appointment of this expedition.

For several years past the very confined state of the active trade of Russia had occupied my thoughts; and, although it was a very natural wish in me to be able to contribute to its improvement, yet I could not but despair of seeing this wish carried into execution, since neither my situation nor the knowledge I possessed could afford me the smallest hopes of doing it. During the time that I was serving in the English navy in the revolutionary war of 1793 to 1799, my attention was particularly excited by the importance of the English trade with the East Indies and with China. It appeared to me by no means impossible for Russia to participate in the trade by sea with China

* Although the public has been made acquainted with many circumstances relative to this part of the introduction, through an article of mine in Storch's Annals; I think it, however, necessary to repeat them here, that the narrative may not be interrupted.

and the Indies. Most of the European nations which have any commerce by sea, had more or less share in the trade with these countries, so rich in all kinds of natural productions; and those which have particularly cultivated it, have always arrived at a high degree of wealth. This was first the case with the Portuguese, afterwards with the Dutch, and is so now with the English, nor can there be any doubt that Russia would gain by an intercourse with China and the East Indies, even although she had no establishments in those countries: the chief obstruction to trade, however, with these distant regions, is the want of people capable of commanding her merchant vessels. None but officers in the king's service could be employed for this purpose, and even among these, with the exception of a few Englishmen, there are not any at all acquainted with the East Indian seas. For this reason I determined upon going myself to India: Count Woronzow, the Russian ambassador in London, soon procured me an opportunity of doing so; and in the early part of 1797, I sailed to the Cape of Good Hope on board an English line-of-battle ship, and from thence in a frigate to India. I remained there a twelvemonth, and as I could not proceed to China in a king's ship, I went there on board a merchantman, in order to become acquainted with the dangerous navigation of the Chinese sea.

Hitherto my thoughts had been only bent on a trade from European Russia to the East Indies and China; but an accident gave my view of this subject another turn, and to this I may attribute the second voyage which I undertook. During my stay in Canton in the years 1798 and 1799, a small vessel of about a hundred tons, commanded by an Englishman, arrived

there from the north-west coast of America: it had been fitted out in Macao; the whole voyage did not occupy above five months; and the cargo, which consisted entirely of furs, was sold for 60,000 piasters. I knew that my countrymen carry on a considerable trade in furs with China, which they bring from the islands in the eastern ocean, and the coast of America; and that they are first obliged to carry their skins to Ochotzk, from whence they send them to Kiachta, which occasions a loss of two years and often more; that every year several vessels with their rich cargoes are lost during their voyage across the eastern ocean was likewise well known to me; and it therefore appeared to me that the advantages would be infinitely greater, if the Russians were to bring their goods to Canton direct from the islands or the American coast. This idea, little as it possesses of novelty, struck me as clear and convincing, notwithstanding it had never occurred to the proprietors of the fur trade in Russia, that I determined to make the necessary proposal for carrying it into execution immediately upon my return. During my voyage from China I drew up a memoir, with the intention of handing it over to M. von Soimonoff, at that time minister of commerce, whose commercial knowledge, patriotism, and readiness to forward any undertakings which were for the benefit of the nation, I had heard highly spoken of. In this memoir I laid great stress on the advantages which Russia foregoes by leaving her active trade in the hands of foreigners; and endeavoured to disprove the arguments generally adduced to show that it is more profitable for Russia to attend to her internal commerce; conveying at the same time my ideas upon the means of removing the difficulty with regard to the officers and men on board the merchant ships. I proposed to add to the

six hundred young persons who are brought up for the navy in the corps of sea cadets, and who are all of the nobility, a hundred commoners to be destined solely for the merchant service, but who should, in fact, be on the same liberal footing as the nobles. It seemed to me that good seamen could not fail of being produced from young people who had studied the theory of their profession, with the experience they would naturally acquire during their voyages on board these merchant ships; and I particularly recommended, that the captains of king's ships should be very attentive to the boys on board, and should point them out whenever they observed any rising talent, and recommend them, that their instruction might be completed in this corps. In this manner a most useful body of men might be created for the service of their country; nor would Cook, Bougainville, or Nelson, have ever been what they proved to theirs, if attention had only been paid to their birth. I next drew a slight picture of the Russian fur trade; represented all the obstacles to which the enterprising men who conduct it are exposed, although they are not to be deterred by any dangers; and showed of how great advantage it must prove to Russia if this trade were in any degree supported by the government. For this purpose I proposed that two ships should be sent from Cronstadt to the Aleutic islands and to America, with every kind of material necessary for the construction and outfit of vessels; and that they should be likewise provided with skilful shipwrights, workmen of all kinds, a teacher of navigation, as well as with charts, books, nautical and astronomical instruments. In short, that these merchants should be enabled to build good ships in their colonies, the command of

which they might intrust to skilful persons.* In these ships, which were to be constructed there, they should henceforth send their furs to Canton, but without entirely giving up the trade with the Chinese through Kiachta; and the money to be obtained from the sale of furs in Canton, should be appropriated to the purchase of Chinese wares, which could be sent to Russia in ships to be fitted out in the east sea for Canton for this express purpose, or even in the same ships which conveyed the furs from the colonies to Canton, and which on their voyage back, in case they did not procure a complete lading, should touch either at Manilla, Batavia, or the coast of India, and take in goods which in Russia cannot fail of finding a ready and advantageous market. In this manner it would no longer be necessary to pay every year large sums to England, Sweden and Denmark for East Indian and Chinese

* The difficulty of constructing ships in America, in the islands, or in Ochotzk are, however, so great, as I have since learnt by experience, even though all the necessary materials should be sent direct from Russia, that I think it would certainly be more advantageous to send small vessels for the purpose of trading there from the ports of the east sea. The freight of the cargo to be sent in these ships would more than pay the expense of the hulls and their outfit. These expeditions would also be attended with the great advantage of forming seamen on this long voyage, for those parts, where they are so much wanted, instead of the ignorant Promüschleniks, or fur-hunters, who now navigate the vessels, and would tend considerably to the safety of the Company's ships. At all events I consider an uninterrupted communication between the European ports of Russia and the Company's American colonies, and particularly the commerce with Canton, as the only means of bringing the trade of the Russian American Company into a thriving state, if the government holds it necessary to retain its establishments on the north-west coast of America, and firmly to support the system of an active trade. These undertakings, however, on the part of the American Company would require an entirely new organization of their establishment.

goods, and Russia would soon be in a condition to supply the north of Germany with them at a lower rate than either of those nations, as their preparations are much more expensive than ours, and they for the most part can only carry on this trade with specie. The Russian American Company could not fail of becoming in time of so much importance that the smaller East Indian Companies of Europe would not be able to stand in competition with it. This was nearly the purport of my memoir.

I had scarcely arrived in Russia but I wished to present it in person to M. von Soimonoff, the president of the Board of Trade; but I could not obtain permission to go to St. Petersburg. In the mean time M. von Soimonoff, the most intelligent minister of commerce that Russia ever had, was dismissed, and Prince Gagarin appointed his successor. I nevertheless determined to give my memoir to M. von Soimonoff, convinced that if his ideas concurred with mine, he must still have sufficient influence to carry my proposal into execution; but he quitted St. Petersburg and soon after died at Moscow. Count Kuscheleff being at this time minister of marine, I determined to present my memoir to him, and as I could not be personally introduced, I sent him a short abstract of it; but the answer he returned deprived me of all hopes of my plan being adopted. My endeavours to interest private persons in such a speculation proved alike unsuccessful; perhaps they might not have been so if I could have obtained permission to pass a short time at St. Petersburg. At length Alexander I. ascended the throne, and Admiral Mordwinoff shortly after received the office of minister of marine;

a change that again awakened my hopes, and I lost no time in arranging my memoir, which I altered almost entirely: a residence of two years in Russia had opened my eyes to many things, but the material parts remained the same. In January, 1802, I sent it to the admiral: at first I was uncertain as to its fate, but in May I received an answer that my paper met with his entire approbation, and he would take the earliest opportunity of carrying the plan proposed in it into execution. He had imparted it to Count Romanzoff, the present chancellor of the empire, who at that time had just succeeded Prince Gagarin as minister of commerce, and who also favoured it with his approbation; and the proposed measures for the improvement of our American trade excited his warmest interest. Indeed it was only by such a zeal as was evinced by Count Romanzoff and Admiral Mordwinoff that an undertaking like this could so soon have been carried into execution, which, merely on account of its novelty, would naturally occasion great disapprobation and opposition. I hold it my particular duty to speak here of his Excellency Count Romanzoff, as it is chiefly owing to him, that after the proposed voyage had been determined upon, it was really carried into execution: the interest he took in it continued unabated to the last; and on our return it was the Count who proposed to his Imperial Majesty the rewards which he conferred, in a manner peculiar to our gracious monarch, on all who had any share in the expedition.* I

* All the officers on board both ships were raised a step in rank. The captains of the *Nadeshda* and the *Neva* received the order of Waladimir of the third class, and a pension of 3000 rubles for life. The lieutenants and the surgeons one of 1000 rubles. That of the other officers was in proportion to their pay. The men of science attached

may be permitted here, in my own name, as well as in that of all the persons who served under me, to offer my public acknowledgements; and I equally return thanks to his Imperial Majesty for his commands that the account of the present voyage should be published at the expense of the government.

After the execution of my plan was determined upon by the two ministers, Count Romanzoff and Admiral Mordwinoff, the account of the same was sent to his Imperial Majesty, and his Majesty was requested to call me to St. Petersburg. This was done in July, and immediately on my arrival, Admiral Mordwinoff informed me that the emperor had fixed upon me to carry my own plan into effect.* I was not a little astonished when I heard this, for I really had almost given up all hopes of my suggestion being acted upon, and never expected that I should have been selected for the purpose. It was now like-

to the expedition received a pension of 300 ducats for life, and the crew, besides a yearly pension of from 50 to 75 rubles, were permitted, if they chose it, to quit the service.

* In the summer of this same year, an Englishman, established at Hamburgh, of the name of M'Master, came to St. Petersburg, to offer his service to the American Company. He offered to conduct a ship laden with goods to the American colonies; and required, as he was a shipwright, that the construction of the company's ships there should be consigned to him: he likewise proposed to make an establishment in the island of Urup, one of the Kuriles, which he bound himself to superintend for several years, in order to prosecute the whale fishery there: a project with which the American Company was at that time very much occupied. After a long negotiation with the Directors of the Company, he returned to Hamburgh in the autumn, without effecting any thing. There is no doubt that this Englishman might have proved very useful to the Company: he appeared to me to be of an enterprising mind, a very skilful seaman, and a man of good qualities.

wise become more difficult for me to accept the proposal: a beloved spouse had, some months before, made me the happiest of men, and I expected shortly to become a father; nor could the attainment of all my other wishes have rendered me more happy than I actually was. My circumstances were independent, and I was on the point of quitting the service, in order to pass the rest of my days in a peaceful and undisturbed retirement; a happiness I was now to forego, and my feelings opposed me when I was about to accept this, to me, so honourable an appointment. But the minister declared to me that it was expected I should not refuse it; and that in case I did not undertake to carry my own plan into execution, it would fall entirely to the ground. I owed a sacrifice to my country, and I made it: I determined upon the voyage, and felt the greatest sorrow and affliction on account of my wife. How, indeed, could I remain insensible to the tears of a dearly beloved spouse, which I saw her shed daily during a twelvemonth? The consciousness of being useful to my country, which was always the object of my wishes, kept me steadfast to my resolution: the hopes of bringing the voyage to a happy conclusion encouraged me, and I began to make the necessary preparations for it.

CONTENTS TO VOL. I.

DEDICATION	Page ix
INTRODUCTION	xi

CHAP. I.

PREPARATIONS FOR THE VOYAGE.

Appointment of a Commander to the Expedition—Purchase of the Ships in England—Determination on an Embassy to Japan—Arrival of the Ships at Cronstadt—Visit of His Imperial Majesty—Anchor in the Road—List of Astronomical and Philosophical Instruments—Names of the Officers—Choice of Provisions and Clothing—Visit of the Ministers of Commerce and Marine—Different Arrangements on board the Ships	1
--	---

CHAP. II.

DEPARTURE FROM RUSSIA AND ARRIVAL IN ENGLAND.

The Nadeshda and Neva sail from Cronstadt—Their Arrival in Copenhagen Roads—Their Stay there prolonged—Danish Naval Archives—Commodore Löwenorn—Construction of new Lighthouses on the Danish Coast—Copenhagen Admiralty—Departure of the Nadeshda and Neva for Falmouth—Storm in the Skagerrak—The Ships separate—The Ambassador goes on board an English Frigate to London—Arrival of the Nadeshda at Falmouth—Joins the Neva—Stay at Falmouth	20
--	----

CHAP. III.

PASSAGE TO THE CANARY ISLANDS AND BRAZIL.

The Ships leave Falmouth—Observe an extraordinary Meteor—Arrival at Teneriffe—Stay there—Remarks on Santa Cruz—Inquisition—Unbounded Authority of the Governor General of the Canary Islands—Astronomical and Nautical Observations	
---	--

CONTENTS TO VOL. I.

at Santa Cruz—The Nadeshda and Neva sail to the Brazils—The Island of St. Antonio—Remarks on the Passage to the Equator—Fruitless Search for the Island of Ascension—Opinions on its Existence—Perceive Cape Frio—The Situation of this Promontory—Storm off St. Catherine's—Anchor between St. Catherine's and the Brazils 37

CHAP. IV.

STAY AT ST. CATHERINE'S.

Reception at St. Catherine's and Occurrences there—The Observatory set up on the Island of Atomery—The Masts of the Neva found to be bad—Prolonged Stay at St. Catherine's—Remarks on the Fortifications towards the Sea, on the Town of Nuestra Señora del Destero, and the Troops there—Miscellaneous Observations on the State of this Colony, its Trade and Productions—Refreshments which the Navigator finds there, and Prices of them—English Privateer—Nautical and Astronomical Observations 68

CHAP. V.

DEPARTURE FROM BRAZIL AND ENTRANCE INTO THE GREAT OCEAN.

The Nadeshda and Neva sail from St. Catherine's—New Orders issued to Captain Lisianskoy—Character of the Japanese on Board—Strong Current by the Rio de la Plata—Perceive Staatenland—Weather Cape St. John—Longitude of this Cape—Reach the Meridian of Cape Horn 82

CHAP. VI.

FROM THE MERIDIAN OF CAPE HORN UNTIL OUR ARRIVAL AT NUKAHIWA.

The Nadeshda and Neva sail round Tierra del Fuego—Uncommon low State of the Barometer during this Time—The Ships separate in a Storm—Continue the Voyage to the Washington Islands—Alter the Plan of our Voyage—We cross the Southern Tropic—Series of Lunar Observations for six Days—Remarkable Error of our Chronometers—We perceive one of the Mendoza Islands—Sail along the Coast of Uahuga—Arrival at the Island Nukahiwa—We anchor in Port Anna Maria 97

CHAP. VII.

STAY AT NUKAHIWA.

Barter with the Inhabitants—Total want of animal Provisions—Visit to the King—Arrival of the Neva—Misunderstanding with the Inhabitants—They take to their

CONTENTS TO VOL. I.

Arms—Second Visit to the King—Amicable Arrangement—Visit a Moray—Discovery of a new Harbour, which is called Port Tschitschagoff—Description of the Vale of Schegua—The Nadeshda and Neva sail from Port Anna Maria for the Sandwich Islands 113

CHAP. VIII.

GEOGRAPHICAL DESCRIPTION OF THE WASHINGTON ISLANDS.

First Discovery of the Washington Islands—Reasons why this Name should be preserved—Description of the Islands of Nukahiwa, Uapou, Uahuga, Mottuaity, Hiau, Fattuuhu—Little Advantage which Ships would derive from touching at the Washington or Mendoza Islands—Description of the Southern Coast of Nukahiwa, and the Bay of Anna Maria—Directions for entering it—Weather and Climate—Winds and Tides—Astronomical and Nautical Observations in Port Anna Maria. 126

CHAP. IX.

DESCRIPTION OF THE INHABITANTS OF NUKAHIWA.

Account of the Natives—Personal Beauty of the Men—Their strong Health—The Women—Tattooing—Dress and Ornament of both Sexes—Houses—Associations, Tools and Household Furniture—Their Food and Cookery—Fishing—Canoes—Cultivation—Employment of the Men and Women—Form of Government and Administration of Justice—Family Relationship—Art of War—Truce and cause of it—Religion—Mourning Ceremonies—Tahbu—Charms—Roberts—Music—Population—General Remarks upon the Inhabitants of this Group of Islands. 151

CHAP. X.

DEPARTURE FROM THE WASHINGTON ISLANDS. ARRIVAL OF THE NADESHDA IN KAMTSCHATKA.

The Nadeshda and Neva sail from the Sandwich Islands—Fruitless Search for the Island Owaiha Potto—Arrival off the Coast of Owaihi—Remarkable Error in the Chronometers of both Ships—Total want of Provisions—Mowna Roa—Description of the Inhabitants of the Sandwich Islands—The Nadeshda separates from the Neva and sails for Kamtschatka—Experiments on the Temperature of the Sea—Fruitless endeavours to find the Land discovered by the Spaniards to the East of Japan—Arrival off the Coast of Kamtschatka—Situation of Shipunakoy Ness—The Nadeshda enters the Harbour of St. Peter and St. Paul 185

CONTENTS TO VOL. I.

CHAP. XI.

STAY AT KAMTSCHATKA AND DEPARTURE FOR JAPAN.

Occupation on board the Ship in the Harbour of St. Peter and St. Paul—Uncertainty with regard to the continuance of our Voyage—Arrival of the Governor from Nischney Kamtschatsk—Determine upon pursuing our Voyage—Change in the Ambassador's Suite—The Nadeshda quits Kamtschatka—Storm in the Parallel of the Kuriles—The Ship springs a considerable Leak—We determine the Non-existence of a few Groups of Islands, that are laid down in some old Charts to the East of Japan—Captain Colnett—Straits of Van Diemen—We see the Coast of Japan—Violent Storm followed by a great Typhon—We approach the Coast of Japan a second time, and sail through the Straits of Van Diemen—Description of these Straits, and of the Islands lying within them—Anchor at the Entrance of the Bay of Nangasaky 210

CHAP. XII.

STAY AT JAPAN.

Reception of the Russians at Nangasaky—Our Disappointment—Mistrustful Steps of the Japanese Government—The Ambassador quits the Ship—Description of Megasaky, the Ambassador's Residence—The Nadeshda is carried into the Inner Harbour—Departure of a Chinese Fleet, and of two Dutch Ships—Some Account of the Chinese Commerce with Japan—Observations of an Eclipse of the Moon—Remarks on the Astronomical Knowledge of the Japanese—Unsuccessful Attempt of one of the Japanese brought from Russia to kill himself—Probable Reasons for this Attempt—Arrival of a Damio, or Nobleman, from Jeddo—The Ambassador's Audience with this Commissioner—Conclusion of all Diplomatic Business—Permission to return to Kamtschatka—The Nadeshda quits Nangasaky 251

CHAP. XIII.

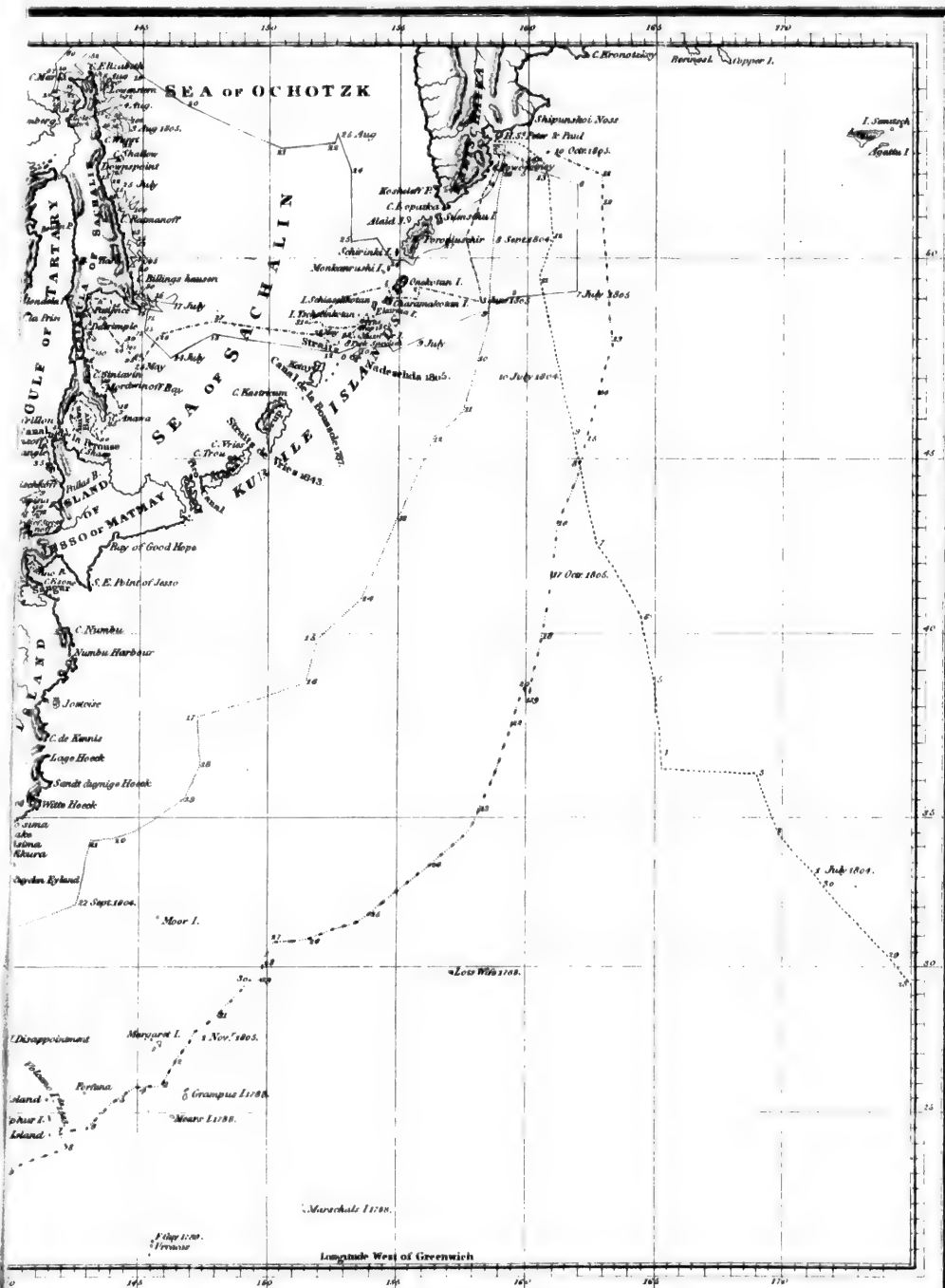
DESCRIPTION OF THE HARBOUR OF NANGASAKY.

First Discovery of Japan by the Europeans—Attempts made by different Nations to form a commercial Intercourse with the Japanese—Examination of the hitherto determined geographical Situation of Nangasaky—Difficulties of taking an exact Plan of the Bay—Description of this, and of the Islands within it—Directions for entering and sailing out of it—Measures of Precaution—Monthly Observation of the Weather from October to April 288

*from Capt.ⁿ Henshaw's
Original Chart.*

Longitude East of Greenwich





KRUSENSTERN'S

VOYAGE ROUND THE WORLD.

CHAPTER I.

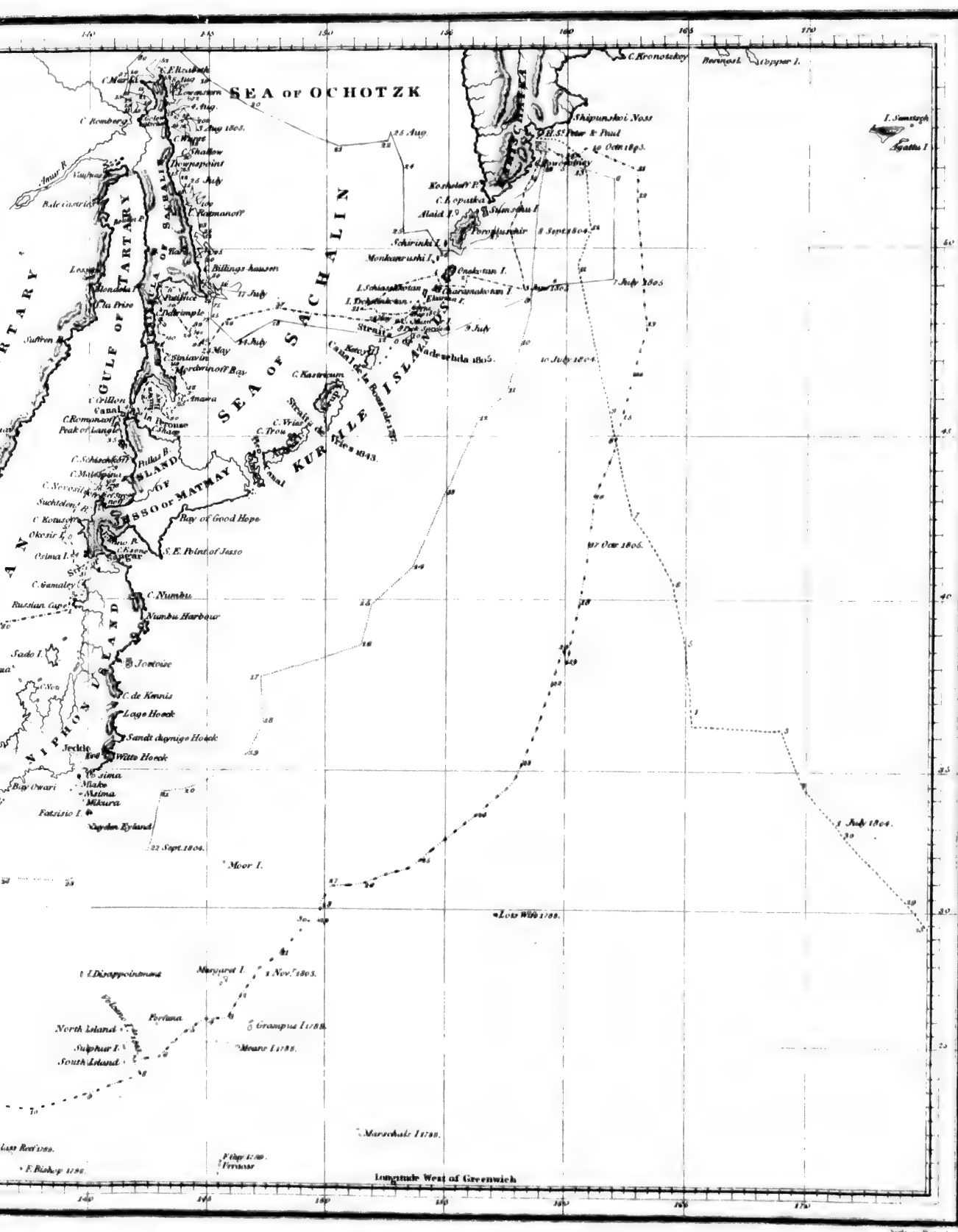
PREPARATIONS FOR THE VOYAGE.

Appointment of a Commander to the Expedition—Purchase of the Ships in England—Determination on an Embassy to Japan—Arrival of the Ships at Cronstadt—Visit of His Imperial Majesty—Anchor in the Road—List of Astronomical and Philosophical Instruments—Names of the Officers—Choice of Provisions and Clothing—Visit of the Ministers of Commerce and Marine—Different Arrangements on board the Ships.

ON the 7th August, 1802, I was appointed to the command of an expedition preparing for the N. W. coast of America. However flattering the enthusiasm with which the nation looked forward to this expedition, I was still not a little surprised to find that I was expected to set sail that same year. This appeared to me impossible, as the two ships were not yet provided, nor indeed were they to be procured in Russia. It was proposed to purchase them at Hamburg, where the cargoes were to be previously sent, so as to enable us to sail in October. This extraordinary hurry, in a preparation where the

By D. F. SUTZMANN 1811.
— Reduced —
from Capt. Krusenstern's
Original Chart.





particular attention to be paid to the purchase of vessels, as well as the advantages to be taken of favorable seasons for the different climates through which we had to pass, were of the greatest importance, appeared to me by no means calculated to secure the success of the undertaking. Upon my presenting a memorial, pointing out the disadvantages of this haste, the voyage was deferred until the following summer.

The selection of a captain for the second ship was left to me. In a voyage of so long a duration, and of so various a nature as ours, which, although conducted by officers of the navy, and intended, in some degree, for philosophical purposes, was principally with a view to commerce; and which, besides the mere sense of duty, required a particular turn of mind and great self-denial:---it was necessary that my choice should fall upon a man, whose attachment, obedience, and disinterestedness might continue the same upon all occasions. This man I expected to find in Captain Lisianskoy, who had served with me during the American war, on board the English fleet, and who had proved himself to be a skilful sea-officer.

As the success of the voyage depended chiefly on the goodness of the vessels, it was necessary to use the greatest precaution in the purchase of them. I therefore dispatched Captain Lisianskoy, accompanied by Rasumoff, a master ship-builder, and a young man of considerable talents, to Hamburg. Notwithstanding the general opinion that we should meet with some vessels there, they could find none fit for the purpose; without losing more time therefore, they proceeded to London, the only place where we may reckon with any degree of

certainly upon the purchase of good vessels. Even there, the precaution not to make too hasty a bargain, occasioned some delay; and it was not until February, 1803, I was informed that two ships, one of 450 tons, three years old, the other of 370 tons, fifteen months old, had been purchased for £17,000 sterling. In addition to this sum, their repairs had cost £5,000. The first of these two vessels was called NADESHDA, or the Hope; the other the NEVA.

In January, 1803, I left Revel, my usual place of residence, for St. Petersburg, in order to be present at the fitting out, and purchase of different articles. My wife accompanied me; but the being obliged to leave my young son behind was a bitter foretaste of a future, and still more painful, separation. I did not remain long in the capital, as an entire new project was added to the former plan of voyage; an embassy to Japan. In the year 1792, under Catharine II. such an embassy had taken place, which, contrary to expectation, had been favorably received by the Emperor of Japan, and a written permission brought back for a Russian ship to go annually to Nangasaky for the purposes of trade,---but only to Nangasaky, and unarmed, otherwise it was to be considered as a measure of hostility: this imperfect result was ascribed to some faults, but principally to the little pomp with which the embassy was conducted. The letter to the Emperor of Japan was not from the Empress herself, but from the governor of Siberia; which had greatly mortified the proud monarch (of Japan.) They had not gone to Nangasaky, although this place alone is open to foreign ships, but into a harbour on the coast of Jesso. The ambassador Laxman was of low rank, and too coarse in his

manners to make any favorable impression on a suspicious nation, which, in the judgment of Europeans, looks more to outward show and parade than to inward merit. Ten years had elapsed, without any use being made of the Emperor of Japan's permission. The extension of Russian commerce under the reign of Alexander I. appeared to make a closer connection with the eastern nations desirable; and it was determined to send a new embassy, taking care to avoid the errors into which the former had fallen. An observation, made in one of the conferences held upon this subject,* that the return of the ships would be delayed at least a year by this step, and the commercial advantages of the expedition in consequence diminished, the Emperor resolved to take the ship destined for the embassy entirely upon his own account, allowing the American Company, at the same time, to put as many goods on board, as could conveniently be stowed; a favour which amply compensated them for every other loss. As only one ship could go to Nangasaky, they were to separate at the Sandwich islands: the Nadeshda was to convey the embassy, which it was supposed might be done in a couple of months, to Japan, and thence proceed to winter at Kamtschatka or Kodiak, and the Neva was to sail immediately to the N. W. coast of America and to winter at the same place. In the summer of the following year, the two ships were, according to the original plan, to call at Canton after taking in their lading, and from thence return to Russia.

* There were present at this meeting: Count Romanzoff, the minister of commerce; Admiral Tschitschagoff, the minister of marine, who had succeeded Admiral Mordwinoff in the ministry some months before; M. de Resanoff, and the Directors of the American Company.

M. de Resanoff, who has been mentioned in the Introduction, was appointed ambassador extraordinary to the court of Japan, and shortly after invested with the order of St. Ann, and the title of privy counsellor. Valuable presents were prepared to secure the favour of the monarch and his ministers, and to effect this with the greater certainty, the Japanese who in 1796 were captured in the Aleutic islands, such of them, at least, as had not embraced the Christian religion, and wished to return home, were to be conveyed back from Irkutsk, the place of their confinement. M. de Resanoff was permitted, in order to increase his suite, to take with him a few young gentlemen of rank, as attached to the embassy. As a number of young persons were to make this voyage at the expense of the government, I wished to occupy the spare room in my ship with such as might contribute to the improvement of science. Our long stay in the southern hemisphere, and the objects of general philosophy, appeared to offer useful employment, particularly, for an astronomer. Mr. Counsellor Tilesius, a scholar, well known on account of his early writings, had been recommended for the expedition, in the preceding autumn, by the Count de Manteufel, who at that time resided in Berlin. Two draftsmen, of the St. Petersburg Academy of Arts, were to accompany us. We were however obliged to leave one behind. I therefore ventured to apply for the appointment of an astronomer. Count Romanzoff, who is animated by a praiseworthy zeal for science, wrote immediately to the celebrated director of the Seeberg Observatory, the Baron von Zach, who shortly after proposed for this service Dr. Horner, a Swiss by birth, and one of his scholars. The worthy Director will allow me to return him here my warmest

thanks for selecting so excellent a man, and one whom I shall always be proud to call my friend, to accompany me.

On the 5th June, 1803, the ships destined for the voyage arrived at Cronstadt; I hastened to examine them and found them excellent, as well on account of their construction as of their internal arrangement. As the ambassador was, with his pretty numerous suite, to sail on board my ship, I chose the *Nadeshda* as being the largest of the two. Notwithstanding the repairs which had been made in England, I found myself under the necessity of changing for new, two of the old masts, as well as all the rigging. This cost us considerable time and labour, and without the friendly assistance which Admiral Mäsoedoff, at that time port captain, and Captain Bütschenskoy, his assistant, afforded me, with the most unremitting attention, we should not have been able, even in the long space of time we were obliged to pass at Cronstadt, to have completed all our work. It is no more than my duty to make my public acknowledgment to these two persons.

On the 6th July I was enabled to give orders for the two ships to be brought into the roadstead, in the expectation of sailing in a few days; but we had the happiness of first seeing His Imperial Majesty at Cronstadt. The object of his visit was to see the two ships which were to carry the Russian flag, for the first time, round the world: an event, which, after a hundred years' improvement in Russia, was reserved for the reign of Alexander. The Emperor's first step, after quitting his barge, was to proceed on board the two ships. He noticed every thing with the greatest attention, and expressed his

satisfaction, as well with the ships themselves, as with the different articles which were brought from England for the voyage. He conversed with the commanders, and attended for some time with pleasure to the work which was going on on board the ship. I conceived myself particularly fortunate in the opportunity of giving loose to my gratitude, and expressing to the Emperor the sense which I entertained of his extraordinary munificence towards me: for he had been so gracious as to assign the revenues of an estate, amounting to the yearly sum of 1500 roubles, for twelve years, to my wife, in order, as he kindly expressed himself, to set my mind perfectly at ease, during my absence, with respect to the welfare of my family. An act of grace which surprised me, and which I valued the higher, as it proved how much the Emperor felt that a favour conferred upon my wife would be infinitely more grateful to me than if it had been bestowed upon myself.

Captain Lisianskoy, who, as has been already mentioned, had attended to the purchase of the ships, had provided them with all the articles which are indispensable in so long a voyage. Among other things, he had procured a considerable supply of the best antiscorbutic remedies; such as portable soup, essence of malt, essence of fir, or spruce, dried yeast and mustard; as well as the best medicines, a list of which Dr. Espenberg, the surgeon of my ship, had sent after him to England. I had bespoke six timepieces and a complete assortment of astronomical and other philosophical instruments. Four of the timepieces were made by Arnold and two by Pennington. These I carried directly to St. Petersburg, and gave over to my worthy friend Schubert, of the aca-

demy, who, with the greatest kindness, undertook to attend to them. I am the more indebted to him on this account, because of the great value of time to a man who has enriched the world with such excellent writings upon one of the highest branches of literature. The astronomical instruments were all made by Troughton, and consisted of a reflecting circle, twelve inches in diameter, with flying nonius. A ten inch sextant and stand for each ship, two artificial horizons, a theodolite, two azimuth compasses, a nautical barometer, an hygrometer, a thermometer, and an artificial magnet. An achromatic telescope with tripod and equatorial motions, for observing, on shore, the eclipses of Jupiter's satellites, &c. which I had bespoken, was not sent, but I supplied the want of the former in England. The instruments which Mr. Horner brought with him from Hamburg, or bought afterwards in England, were—

A portable transit telescope, with an astrolabe affixed to it giving 10 seconds.

A 10 inch sextant, by Troughton.

A stop watch.

A pendulum apparatus of M. von Zach, with silver double-pins, and a micrometrical beam compass.

Another apparatus, with a constant pendulum.

An astronomical quadrant, by Adams, of $1\frac{1}{2}$ foot radius; with a division of 90 and 96, to be used either horizontally or vertically.

A three feet transit by Troughton.

A clock, by Brockbank, the pendulum with wooden rod.

A thermometer, of the kind invented by Six, which shews the greatest degree of heat and cold that has taken place du-

ring the absence of the observer, as a supplement to an instrument for ascertaining the temperature of the sea under water, which I received from Admiral Tschitschagoff, and which was made by Scheschurin, a Russian artist.

A portable barometer by Troughton.

An electrometer by Saussure.

An hygrometer by De Luc.

An aerometer by Troughton.

Two surveying compasses.

An excellent collection of charts, and a well chosen library, left me nothing to wish for in that respect: but the greatest treasure we possessed, and for which we were indebted to the liberality of the Baron von Zach, consisted of a perfect copy of the new lunar tables, by Bürg, which had gained the First Consul's double prize at the National Institute. It was reserved for our expedition to make the first use of these tables, which were corrected up to April of the current year. Their surprising exactness enabled us to ascertain our longitude within a few minutes, while the Ephemeris, calculated according to Mason's lunar tables, put us out of our reckoning, even in our best observations, nearly half a degree.

I conceive it will not be quite superfluous to say a few words respecting the equipment of our ships, as they were the first of this nature which had been fitted out in Russia. On this head there is always something that deserves mentioning, although it may not perhaps be interesting to the general reader.

The choice of the officers and crew was left entirely to

myself, so that it was easy for me to select them according to my own pleasure. The Chevalier Ratmanoff I chose as my first lieutenant. He had served fourteen years in his present rank, and mostly commanded a ship of war. During the last hostilities with France he had so much distinguished himself by his courage and activity, that he obtained the order of St. Ann of the second class. M. de Romberg, with whom I had served in 1801 on board the Narva frigate, which I commanded, and with whose skill I was well acquainted, was my second lieutenant. The name of my third lieutenant was Golowatscheff. I had selected him for this voyage without having seen him. He was universally approved, and until the unfortunate circumstance which took place on our return, at St. Helena, I never found any cause to repent of my choice. A M. von Löwenstern was my fourth lieutenant; he had lately quitted our service, after having been six years in England, and in the Mediterranean, under the command of Admirals Channikoff, Kartzoff, and Uschakoff. At the expiration of the war, (the uniform duty in time of peace having no charms for one of his active disposition,) he left Russia in order to enter the French service. From thence he hastened back as soon as he was informed of my voyage, and at Berlin he met with my proposal that he should accompany me. To an amiable and cultivated mind, he added a very extensive and well grounded knowledge of his profession. The choice of Baron Billingshausen, my fifth lieutenant, I made, like that of Lieutenant Golowatscheff, without being personally acquainted with him. His reputation as a skilful and well informed officer in the different branches of navigation, which I found to be perfectly just, induced me to propose to him to sail with me. Dr. Espenberg I chose as physician to my ship. We had long

been friends; and I may perhaps attribute to this friendship alone, his resolution to undertake the voyage. I was acquainted with his skill; and, in my endeavours to preserve the health of the crew, I met with the most active assistance from him. Dr. Laband I chose as physician to the other ship. He had been recommended to me by some of my friends in St. Petersburg as a man of great knowledge, and of a most amiable character; qualities of which he gave sufficient proof during the voyage, and which made me regret that our ships were so often separated. The Counsellor von Kotzebue was desirous that his two sons, who had been educated in the corps of cadets, should accompany me. His request to the Emperor, to this effect, was immediately acceded to. Difficult as the father must have found it to allow them to undertake so dangerous a voyage at the early age of fourteen and fifteen years, yet the result has fully repaid him for this sacrifice of paternal affection. They have profited very much by the expedition, and are returned improved and well informed young men.

My crew consisted of fifty-two men, of whom thirty were sailors: all young and vigorous, who had offered themselves at the first report of the expedition. Two of them I was obliged to part with just before I sailed. Some symptoms of scurvy had appeared upon one of them, and the other, who had been married about four months, had fallen into a state of deep despondency at the prospect of parting with his wife. I had indeed advanced him more than his yearly pay of 120 roubles, to provide for her, and he was besides in very good health; however I left him behind, as I considered a contented

and cheerful disposition as far more necessary upon such a voyage than even constant health. I wished too that no constraint should be used in this expedition.

All my sailors were well supplied with clothes and linen, the greatest part of which I had ordered from England. Besides this, I had had mattresses, pillows, sheets, and coverlids, made for each man, and, as a necessary measure of precaution, caused a considerable additional supply of clothes and linen to be provided. The ships' provision was on the whole very good. The biscuits made in St. Petersburg of wheat flour lasted upwards of two years perfectly uninjured. The salt meat was in part pickled in Hamburg, and part of it at St. Petersburg; that of St. Petersburg was particularly good, and continued without spoiling during the whole of the voyage. As it is the first example of meat prepared with Russian salt keeping three years, in all kinds of climates, the name of the man, whom we have to thank for it, certainly deserves to be remembered. He was called Oblomkoff. The quantity of butter which I took with me was but small, as it will not keep between the tropics, and, when in a rancid state, is prejudicial to health: instead of this article, I took out a considerable quantity of tea and sugar, as I was anxious to accustom my people by degrees to this healthy and antiscorbutic beverage. I promised myself too, great assistance, in preserving the health of the crew, from the use of sourcrout and cranberry juice. With the preparations, which, in this respect, were made for the expedition, I had every reason to be satisfied; but to my no small mortification, it was discovered, upon unloading the ships during the voyage, that sufficient at-

tention had not been paid to the choice of casks, the consequence of which was, that a good deal of the provision was destroyed. I regretted particularly the loss of the sourcroust, nearly two-thirds of which I was obliged to throw overboard; and I was under the necessity of packing a great proportion of the biscuit in sacks, as I had no room for the casks in which it had been stowed, and it was impossible that, packed in this manner, it could keep for any length of time.

In the fitting out of my ships, it was necessary to provide for the different objects of the voyage, the combination of which was attended with many inconveniences. The ship belonged indeed to the Emperor, and was destined for the embassy; but it was also allowed to the American Company to lade it with their goods. Of this lading, and of the many presents destined for Japan, I could obtain no previous information: with regard to the latter, indeed, I continued in ignorance until the last moment. I was in the road, and effects were still arriving, which I was not a little puzzled how to stow. I was therefore obliged to resort to measures, which, in the end, might have proved very injurious, and to leave behind a supply of meat and biscuit sufficient for nine months, as well as a considerable quantity of cordage. The ship was, notwithstanding this, so deeply laden, that she would have suffered severely in a storm. Had the whole of this merchandize, as well as the ship's provisions, and the presents destined for Japan, been sent sooner to Cronstadt, we might easily have calculated, upon the arrival of the ships, how much could conveniently be stowed away; but they were only sent by degrees from St. Petersburg, after their arrival. The constant westerly winds occasioned like-

wise a considerable delay in their conveyance. I might indeed have remedied the evil, by causing the ships to be again unloaded, for which, as it afterwards proved, there was more than sufficient time, as I was detained three weeks in the roads; but as the ambassador was expected daily, it appeared to me that we should gain time by doing this at Copenhagen, where I should at all events be obliged to stow the cargo anew, in order to make room for 80 puncheons of brandy, which I was to take in there.

During this time, and while we lay in the roads, we had frequent visits from St. Petersburg. Many persons were astonished to perceive how very heavily we were laden, and how little prepared to undertake so long a voyage, without exposure to the risk of losing half our crew. Nor was it likely that the Emperor would remain long unacquainted with our condition. The ministers of commerce and marine were directed by His Majesty to proceed on board the ships, and consider the means of procuring us more comfort and security. These gentlemen arrived on the 2d of August, and gave orders that, as the ship was so overcharged, as much of her cargo as I might think fit should be left at Copenhagen. And on account of the want of accommodation, (the officers amounting to more than twenty-five persons,) it was farther resolved, that five of the volunteers attached to the ambassador's suite, should remain behind. The enthusiasm of these gentlemen to undertake the voyage, was however so great, that they were willing to put up with every inconvenience, and insisted that no difference should be made between them and the common men; and it would indeed have grieved me to exclude so many young persons of

education. Notwithstanding all this, we were so crowded, that, had not my crew been already very small, I would willingly have left some of them behind, to procure more convenience for the others. After these arrangements, I looked upon the preparations for sailing as completed, and therefore imparted my signals to Captain Lisianskoy, as well as my instructions for the voyage, and for our rendezvous, in case of separation. I now waited only for a fair wind to put to sea.

On the 20th July, I received my timepieces on board. They had been a month in the observatory of the Academy, where the Privy Counsellor Schubert had compared their daily rate of going with the culmination of the sun and different stars.

On the 18th July at noon, No. 128 (a box timekeeper by Arnold) was slower by $2h. 9' 40''$ than mean time at St. Petersburg, and was losing daily $+9'' 376$. No. 1856, a pocket chronometer by Arnold, was slower by $1h. 55' 42'', 97$ than mean time at St. Petersburg, and gained daily $-7'', 513$. The third watch, a pocket chronometer by Pennington, was faster $0h. 0' 22'', 63$ than mean time at St. Petersburg, and lost daily $+5'' 215$. The Observatory stands $2h. 01' 1''$ east of Greenwich.

The rate of going of these watches had altered very much in the space of two months; for upon their delivery to Captain Lisianskoy in London, it was

No. 128	$+4'' 88$
No. 1856	$-2'' 60$
Pennington	$+0'' 79$

I consider it my duty to mention the names of those who for the first time ventured to undertake so long a voyage under the Russian flag. In a country where similar expeditions were altogether new, such an adventure was likely to inspire more enthusiasm, and, in many, more alarm, than in countries where voyages round the world, and an absence of several years were already become common. The greatest extent of Russian navigation in the Atlantic had never yet reached the tropics. We had now the prospect of proceeding as low as the 60° of north latitude in one hemisphere, and up to the same degree of south latitude in the other. The tempests of Cape Horn, the burning heat of the equator, might well alarm persons, who had no means of forming a correct idea of them; yet there were so many volunteers for the voyage that it would have been an easy matter for me to have filled several larger ships with the best sailors of the Russian navy. I had indeed been advised to take some foreigners among my crew: but I knew too much of the spirit of Russian sailors, whom I prefer to all others, even to the English, to listen to this proposition. Except MM. Horner, Tilesius, Langsdorff and Laband, there were no foreigners on board either of the ships.

NADESHDA.

Capt. Lieut. von Krusenstern, Chief of the expedition.
 Mackary Ratmanoff, 1st Lieutenant.
 Fedor v. Romberg, 2d do.
 Peter Golowatscheff, 3d do.
 Herman v. Löwenstern, . . . 4th do.
 Baron Billingshausen, 5th do.

PREPARATIONS FOR THE VOYAGE.

17

Philip Kamentschikoff, . . . 1st Pilot.
 Wasiley Spolochoff, 2d do.
 Dr. Charles Espenberg, . . . 1st Physician.
 John Sydham, Surgeon.
 Dr. Horner, Astronomer.
 Dr. Tilesius, }
 Dr. Langsdorff, } Naturalists.

The latter quitted the ship on the 26th June, 1805, on a journey to the N. W. coast of America.

Otto v. Kotzebue, }
 Moritz v. Kotzebue, } Cadets.

Alexey Raifskoy, Serjeant of Artillery.

Ship Clerk		1
Sailmaker		1
Carpenters		2
Caulkers		2
Cooper		1
Gunsmith		1
Boatswain		1
Quartermasters		4
Gunners		2
Sailors		30
Ship's Cook		1
Servants		2

48

In all 64 persons.

NEVA.

Capt. Lieut. Lisianskoy.

Pawell Arbusoff, 1st Lieutenant.

Peter Powalischin, 2d do.

Fedor Kowcdäeff, 3d do.

Wasiley Berg, 4th do.

Danila Kalinin, 1st Pilot.

Dr. Laband, 1st Physician.

Peter Korabitzin, Clerk of the American Company.

The crew of the Neva consisted of 46 persons besides the abovementioned officers.

In the suite of the ambassador to Japan, his Excellency the Counsellor of State and Chamberlain Resanoff, on board the Nadeshda, were

Herman von Friederici, Major of the General Staff.

Count Fedor Tolstoy, Lieutenant of the Guards.

Fedor Fosse, Counsellor.

Stephen Kurlandzoff, painter of the Academy.

Dr. Brinkin, Physician and Botanist.

Fedor Schemelin, Clerk of the American Company.

A Huntsman, a Cook and a servant: besides five Japanese, and six passengers for the colonies on the N. W. coast of America.

In all, on board the Nadeshda, 85

On board the Neva, 54

With the exception of Major Friederici, all the suite of the

ambassador returned overland to St. Petersburg. They left the ship at Kamschatka in the year 1805.

On the 4th August, N. S. (which I shall constantly use) the wind shifted to the eastward, and I immediately made the signal to weigh; before two hours, however, had elapsed, it shifted round to the westward, and blew very hard until the 7th, when it allowed us to quit Cronstadt. I had now a painful task before me, to take leave of my beloved wife. I left her in the arms of friendship. I shall never be able to make a sufficient return to the excellent family, who, during our stay at Cronstadt, gave us the most friendly and tender reception, for their kindness to myself and to my disconsolate wife.

CHAPTER II.

DEPARTURE FROM RUSSIA AND ARRIVAL IN ENGLAND.

The Nadeshda and Neva sail from Cronstadt—Their Arrival in Copenhagen Roads—Their Stay there prolonged—Danish Naval Archives—Commodore Löwenorn—Construction of new Lighthouses on the Danish Coasts—Copenhagen Admiralty—Departure of the Nadeshda and Neva for Falmouth—Storm in the Skagerrak—The Ships separate—The Ambassador goes on board an English Frigate to London—Arrival of the Nadeshda at Falmouth—Joins the Neva—Stay at Falmouth.

ON the 7th August, at nine in the morning, the wind shifted from S. W. to S. by E. and by ten we were under sail. Admiral Channikoff came on board, to wish us a happy voyage, and accompanied us to the guard-ship which lies about four miles from Cronstadt. The day was very fine and warm, and the chronometer stood at 17°; it seemed however to threaten bad weather. The nautical barometer fell in a few hours 4 lines, from 29in. 90 to 29in. 50. At noon the lighthouse at Tolbushin bore N. E. 74° some miles off; and at eight *p. m.* the lighthouse on the island Seskar S. W. 20°. At ten the wind shifted in a squall to S. W. and obliged us to tack during the night. The next day it increased, and blew at S. W. and W. with very bad weather, so that we were obliged to beat about off the island of Hoehland, so much decried by our sailors, as we could not weather it.

On the 10th August, the wind fell, and we again had some fine weather, which was very acceptable to our young Ar-

gonauts. At noon, our latitude was observed to be $60^{\circ} 03' 39''$ N.; the longitude, according to the timekeepers, was $26^{\circ} 58' 15''$ E. of the meridian of the observatory at Greenwich.* At two *p. m.* we weathered Hochland. At eleven, got a good lunar observation for the calculation of our longitude. According to this, reduced to mid-day, it was $26^{\circ} 48' 00''$ E. By the timepieces, it was $26^{\circ} 41' 12''$. The latitude at noon was $59^{\circ} 56' 00''$ N. At length the wind, to our no small satisfaction, shifted to S. E. At nine *p. m.* we perceived the lighthouse on the island of Kockschar, bearing S. W. distant eight miles. The longitude of this lighthouse I found by the timepieces to be $25^{\circ} 27' 26''$ E. At twelve, according to our reckoning, we had passed Revel, and at six the next morning, the lighthouse at Packerort and the island Ottesholm. At ten, we saw the lighthouse upon the isle of Dagen, which, at mid-day, bore S. E. 14° : during the afternoon we lost sight of it. The longitude of this lighthouse I found $22^{\circ} 07' 10''$ E., and that of Packerort $23^{\circ} 51' 18''$ E. On the 13th August, in $57^{\circ} 44' 30''$ latitude, and $20^{\circ} 00' 45''$ longitude, we found the variation of the needle to be, according to several observations made with two compasses, $13^{\circ} 15' 10''$ W. On the 14th, at five in the morning, we perceived the island of Gothland, along the coast of which we sailed during nearly the whole day, at the distance of about 10 or 12 miles, and enjoyed a very beautiful prospect. This morning, at eight, a seaman belonging to the Neva fell overboard, and although a boat was immediately lowered,

* The longitude throughout the voyage is calculated by the meridian of the observatory at Greenwich: from Cronstadt to Greenwich, east; then west, until the circuit is completed; and again east, until their return to Cronstadt.—TRANSLATOR.

it was not possible to save him. He was an excellent swimmer and of a strong constitution; and we concluded that he must have disabled himself in his fall. At four *p. m.* we saw point Hoburg, in the island of Gothland, bearing N. W. by N. distant about 12 miles. At five, the variation of the needle was $14^{\circ} 45' 00''$ W., our latitude being at that time $57^{\circ} 02' 50''$ N. At twelve the next day, the island of Oland was seen from the masthead, and at four *p. m.* the fire beacon, which stands at the southernmost point of this island, bore N. W. 39° , distant about 15 miles. The longitude of this point was, by our timepieces, $16^{\circ} 28' 30''$ E. As, according to my reckoning, we should pass the island of Bornholm at about two *a. m.*, and the wind blew very fresh at E. S. E. with bad weather, I considered it prudent to lye by for some hours during the night. On the 16th August, at day-break, we saw the island, the northernmost point of which, at six o'clock, bore S. S. E., about 6 miles off. This point, upon which there is an excellent lighthouse, built by Commodore Löwenorn, is, by our timepieces, $14^{\circ} 42' 20''$ E. At half past three we saw the isle of Mön. The wind, which had blown pretty fresh, now became so moderate, that we were obliged to cast anchor about 21 miles from Copenhagen. Early the next morning we weighed again, and about half past five in the evening came to an anchor in $7\frac{1}{2}$ fathoms water, over a clayey bottom, in the outer road of Copenhagen. The Crown battery bore S. W. 65° of us: the round tower in the town, S. W. 50° .

Immediately after we had anchored, an officer from the Crown battery came on board to congratulate us on our arrival, and to offer us, on the part of the government, every assistance that

we might stand in need of, for the advancement of our affairs. As we should have to unload the ship entirely, I requested permission to do this in the inner road, which was granted me by the Admiralty the next morning. I sent the powder off immediately, and on the 20th August we went in with the Neva, where, for the greater security, we moored both ships, at double anchor. The Admiralty likewise provided us with boats to unload, and we therefore began the task, which was attended with more difficulty than I had imagined, without delay, and after ten days labour had nearly completed it, when I received a letter from our consul at Hamburg, which placed me in the very unpleasant necessity of recommencing our labour: for I was advised to pickle again the salt meat which had been purchased in Hamburg; as it would otherwise not keep long. This tardy advice was too important not to be taken, although it obliged us to unload nearly the whole ship; as I had been induced, at Cronstadt, to stow this meat, from its particular goodness, quite at the bottom of the ship, with the intention of not using it for two years. Upon resalting it, it appeared, that within a very few months we should have been obliged to throw nearly the whole of it overboard, as several casks of it were already damaged. I now therefore had the greatest part of the salt meat from Petersburg examined, which was in every respect better than that from Hamburg: we found however that more of the casks were bad, which we changed for new ones. Without this precaution, and that of again salting the meat purchased at Hamburg, I am convinced that the half of these provisions would have been destroyed.

Our long stay at Copenhagen was very unpleasant to me,

as well on account of the vexatious employment I had there, as of the loss of time. I was however fully repaid by the society of M. Bugge, Director of the Copenhagen Observatory, and M. Löwenorn, Captain of the Danish fleet. The instructive conversation of these two worthy men, rendered their acquaintance infinitely agreeable to me, in my present situation. Professor Bugge, with the greatest kindness, allowed me to leave my chronometers in the observatory, and offered to attend to them during our stay: a task which he very punctually executed. M. Bugge possesses an excellent cabinet of natural history, of which he makes constant use in his lectures, which are attended by the principal people of Copenhagen. His library is considerable, and appears to be well chosen. His astronomical books occupy a small room adjoining the great library, which, at the same time, serves him as a study.*

The Copenhagen observatory, it is well known, owes every thing to its present worthy Director, having before his time been merely a name. Its situation upon what is called the round tower, the height of which is 120 feet, is excellent. The prospect from this tower is very fine: it overlooks the whole city, the harbour, and the road. The opposite coast of Sweden is very clearly to be distinguished, and, with a tolerable glass, one may count the houses in Malmoe and Landscrona. This tower was built in the reign of Christian IV. and converted into an observatory in the year 1656, by Christian Longomon-

* In the bombardment of Copenhagen in 1807, Professor Bugge is said to have lost the whole of his library, his cabinet of natural history, and a very valuable collection of charts.

tanus, a disciple of the celebrated Tycho Brahe. The chief instruments in this observatory are a quadrant to fix in the wall, with a radius of 6 feet, by Ahl; a zenith sector of 12 feet; a passage instrument, and a whole circle, being the first that ever was used; one of Herschel's 7 feet telescopes; a 10 feet achrometer, and one of 3 feet, by Nairne and Blunt, and some quadrants. Near the observatory are four comfortable rooms, in which Syöberg and his sons, Mr. Bugge's assistants, reside. I saw here also several chronometers made by a Copenhagen artist of the name of Armand, which, with the exception of one, were all very bad. Some years ago Captain Löwenorn was sent to the West Indies to try these timepieces, and as his report was unfavorable, they will probably never come into use.

In Denmark, the office of head pilot is combined with that for the construction and superintendence of the lighthouses. M. Löwenorn, who has held this office, since the death of Admiral Lous, is indefatigable in his endeavours to execute, in the best possible manner, this (on account of the danger of the Danish and Norwegian coasts) most important part of his laborious duty. There is scarcely a lighthouse, which, since he has had the direction of them, has not been either rebuilt, or considerably improved. He has already constructed four new ones, since the year 1797. During our stay here, he was particularly occupied in the construction of a new lighthouse upon Christians-öe near Bornholm, which, as it will require, on account of the vicinity of that upon the northernmost point of Bornholm, which is lighted by a coal fire, a different one, easily to be distinguished, he has determined to light by a

parabolic reflector to be turned by clockwork. He had the goodness to shew me both the reflector and the machinery. There are nine reflectors of brass, polished with emery, and twice gilt in the fire. The six side ones are four feet in diameter, and the three middle ones rather smaller than the rest. They are a little concave. The focus is at a distance of $4\frac{1}{2}$ feet. An important improvement in the same, which is entirely of the invention of M. Löwenorn, is, that before every lamp opposite the great mirror, he has placed a small reflector, $2\frac{1}{2}$ inches in diameter, about $4\frac{1}{2}$ inches off, to collect the rays of the light which would otherwise be lost. The reflectors are driven round in six minutes by a large machine, which appeared to be so admirably constructed, that Dr. Horner, who had lately seen some of a similar kind in England, preferred this to the English.

M. von Löwenorn has also been Director of the Royal Naval Chart Archives since the year 1784. The important charts which have been published under his direction are in the hands of every seaman, and are particularly valuable from being mostly accompanied by a very instructive memoir. The Danes have been employed for some years in making an astronomical and trigonometrical survey of the coasts of Norway; of which six charts have already appeared, and must be particularly good, as the most skilful officers were employed in constructing them, under the immediate inspection of the astronomer Bugge.* The Sea Chart Archive is in the old Holm: although no fine building has been appropriated to it, the

* Upon my return to Copenhagen in 1806, this survey of the Norway coasts was completed, and all the plans engraved.

establishment is nevertheless very complete and convenient, and possesses a collection of almost all the European charts and voyages. M. von Löwenorn proposes to establish here a smaller observatory, for which the house is well situated. It is well known, that by his recommendation a commission for nautical longitude was established in Copenhagen in the year 1800, of which he and Professor Bugge are the directors. The object of this new establishment is to give the calculations of the moon's distance from the planets. In 1804, the first number of these Danish Ephemeris is to appear.*

Through the kindness of the Chamberlain Sten Bille, who is also Captain of the Fleet and member of the Admiralty, we were allowed to visit that institution. It has long had the reputation of being complete and perfect in its arrangement, and it is impossible to deny it this praise. Every ship in the royal navy has, in the different storehouses, which are all built with taste, a particular apartment allotted to the materials for fitting it out. In one is all the rigging, in another the cables, in a third the sails; in a fourth all the guns. The masts and yards have also their different sheds, so that the whole fleet can be fitted out in a very short time without the slightest confusion, or the loss of time with which it must otherwise be attended. In the Naval Arsenal there appears too the greatest possible order. The supply of timber for ship-building, which is not kept in the open air but in magazines appropriated to that purpose, was very considerable. We visited an entire new

* Many important reasons occurred to prevent this useful undertaking from being carried into effect.

ship, of 84 guns, the Christian VII, one of the handsomest that I ever saw. The master-builder, Captain Hohlenburg, who has built several ships which have all met with approbation, had just quitted the service, to go to the West Indies, where he is to lay the foundation of a dock in the island of St. Croix.*

On the 23d August, two Danish Chinese ships arrived at Copenhagen. One of them, of 1400 tons, sailed two months before the other from Canton, but had sprung a considerable leak, by which a great part of her cargo consisting of tea, nankeen, coffee, sago, rhubarb and china-ware had been destroyed, and she had been obliged to run into an English port. A mutiny likewise was said to have taken place among the men. The ship had 160 seamen, 30 of whom were lascars or East Indian sailors, and 10 Chinese, who had been taken on board, as 40 of the crew had died at Batavia, where they touched on their voyage out. There was a greater want of cleanliness in this ship than I ever saw on board any other; but this was in some measure owing to the constant pumping and the foul evaporations in consequence.

Of the two scientific men who were engaged for our voyage, Dr. Horner as astronomer, and Dr. Tilesius as naturalist, and who had been appointed to meet the ships at Copenhagen, we found the first waiting for us. The second arrived a week after, and Dr. Langsdorff some days later. The last had just

* He died there in the year 1805.

returned to Göttingen from a journey to Portugal and England, and had there first heard of our voyage. His offer to accompany the expedition as a naturalist could not be accepted in St. Petersburg, as Dr. Tilesius was already engaged; such however was the enthusiasm of this philosopher, and so great his ardour to join in the voyage, that he was not to be deterred by this, but went to Copenhagen to make another attempt to gain his wishes, and succeeded.

On the 4th September the lading of the ships was quite completed. A very strong wind at N. W. prevented us however from going into the outer road; though it did not deprive us of the pleasure of a visit from Count Bernstorff and the Imperial Ambassador Count Kaunitz Ritberg, accompanied by their wives.

On this day we also took our timepieces on board. Since the 21st August they had been in the Royal Observatory, where Professor Bugge had tried their rate of going daily by the culmination of the sun and several stars.

On the 1st September, 128 was later than mean time at Copenhagen 1h. 5' 11" 9, and lost at her then rate - - +8" 42.

1856 was later than mean time at Copenhagen 0h. 56' 51" 5, and was gaining daily - - - - - - - - - - -5" 56.

Pennington's pocket chronometer was later than mean time at Copenhagen - - - - - - - - - - - 1h. 0' 8" 4.

The following is a comparison of the rate of going of these

three chronometers in London, St. Petersburg and Copenhagen.

Arnold's, No. 128, in April, in London	- - -	+4" 88
the 20th July, St. Petersburg	- - -	+9" 37
the 1st September, Copenhagen	- - -	+8" 42
Arnold's, No. 1856, in April, in London	- - -	-2" 60
20th July, St. Petersburg	- - -	-7" 51
1st September, Copenhagen	- - -	-5" 56
Pennington's watch, April, in London	- - -	+0" 70
20th July, Petersburg	- - -	+5" 21
1st September, Copenhagen	- - -	+1" 83

On the 7th September, the wind allowed us to get into the outer road, where we found two Russian frigates, the one of 50, the other of 36 guns, under the command of Captain Crow, which had arrived that morning from Archangel.

On the 8th September, at five *p. m.* after taking our powder on board and hoisting in the boats, we weighed anchor and sailed with the Neva to Helsingör, where we arrived that night about eleven o'clock. At day-break we should have continued our voyage, but for a violent storm from the N. W. which kept us here six days. On the 15th September, the weather again became moderate, the wind at W. S. W. and consequently not very fair; I however determined, as the season was far advanced and every delay might be attended with unpleasant consequences, to put to sea; and at six in the morning we began to weigh. At seven we saluted the guard-ship and the fortress of Cronenburg with seven guns, and our salute was returned by an equal number. The wind was pretty high and the greater part of our company seasick. At two the next morning we

were already, by my reckoning, out of the Cattegat;* we neither saw the Scaw light nor that at Malstrand. On the 17th, we saw the Danish frigate Triton, which had sailed some hours sooner than us from Helsingör; she steered more towards the coast of Norway, probably for Christiansand. The weather had been for some days very hazy, with rain and squalls. The barometer fell by degrees to 29*in.* 20. and at one in the morning it fell even below 28*in.* when suddenly a violent storm arose, the wind shifting from S. W. to N. W. The ship heeled more than I ever witnessed before on board any other, which obliged us to take in all the sails and set the stormsails instead. About four *p. m.* we perceived the coast of Jutland, distant about 20 miles. During the storm we had parted from the Neva, and at day-break she was no longer in sight. The following night the storm abated a little, and allowed us by degrees to make more sail; the wind however still hung between W. and W. N. W. with which we could not well get out of the Scagerrak.† On the 19th at four *p. m.* we perceived the southernmost point of Norway, Lindenåo, which we call Derneus, the English Naze; owing to the wind we were however unable to weather it. In the evening it became more moderate. A strange phenomenon, which excited the attention of every body, seemed in the opinion of us all to be the forerunner of a fresh storm. From W. N. W. to N. E. about 15° above the horizon, appeared a bright bow from which hung dark clouds

* M. von Löwenorn, in the memoir which accompanies the chart of the Cattegat, expressly recommends that one should not venture into the Cattegat, particularly in autumn, except with a decided south wind, even when it is to the east of south; for the reason I mentioned above I could not follow this rule.

† Sleeve.

vertically like pillars; many of these aërial pillars could be distinguished by a white colour in front of the others. Until ten o'clock this appearance of the heavens continued to bear its first form, when it separated into two parts. The pillars rose to the zenith, the vapours of which they were formed becoming thinner, so that we could perceive through them stars of the second magnitude. There was a brilliant Aurora Borealis throughout the night, and perhaps the whole phenomenon may have been a species of northern light.

On the 20th, at noon, the Naze bore N. N. W. of us, distant eighteen miles. Towards evening the wind blew hard at E. S. E. with heavy rain; but was followed again in the morning by a calm. I had Hales's machine put over board, to ascertain the temperature of the water on the surface and at a certain depth; but as there was only twenty-four fathoms water, the difference was scarcely to be perceived. The barometer was again very low; it stood at 29 *in.* 16. The sea set in strongly from the northward. These two forerunners of a storm could not be mistaken, and indeed it came on about ten *p. m.* as violent as on the 18th September, only that it was in our favour. The following evening the wind abated; and on the 23d we had fine weather again. We this day fell in with an English fifty gun ship, bearing the flag of Commodore Sir Sidney Smith. He was cruising with his squadron off the Texel; but none of his ships were in sight. The Commodore sent an officer on board to me with a very polite letter, wishing us a successful voyage. In the afternoon we perceived an English frigate, which probably mistook us for an enemy, as she bore down upon us under all sail: it was not, however, until nine that she came up with us. As I found that the

commander, Captain Beresford, was an old acquaintance, with whom I had served nine years in America, I immediately went on board him. One of his masts had been damaged in the last gale, which obliged him to make for Sheerness. I mentioned to him that our astronomer would be forced to go to London to procure some instruments which we still wanted, and he immediately offered to convey him on board his ship to Sheerness, where he expected to arrive the next day. I very thankfully accepted an offer which promised to save so much time, although it would necessarily carry us a little out of our course; for it was too late to send off Dr. Horner that evening, and I was obliged during the night to follow the frigate, which shaped her course towards the English coast. Captain Beresford's politeness went so far, that he sent me a pilot, of whom he had two on board, with orders that he should stay with me as long as I found it necessary. We continued our voyage together until the next morning, when the whole English coast at Orfordness lay before us. Captain Beresford now came on board, and took with him M. Resanoff, Dr. Horner, and Major Frederici, when we immediately parted company. By this opportunity I sent my nephew, a young lad belonging to the corps of marine cadets, to London, that he might return from thence to Russia. The bad state of his health, which had been uncommonly weakened by constant sea-sickness, made it impossible for him to continue the voyage farther with us.

As we had been obliged the preceding night to follow the Virginia, we were now between the English coast and a very dangerous sand-bank, called the Gallopers, upon which there is no mark whatever. It is usual to keep outside of this bank,

and without a pilot one should never venture to take the inner passage. At night the wind became directly adverse, which obliged us the next day to beat about between the north and south Foreland, and, as it fell calm towards the afternoon, and the tide which flows there out of the English channel was against us, we brought to with a small sheet anchor. The wind soon after shifted to the eastward, and we passed the same night through the straits of Dover.

On the 26th September, at four *p. m.* we crossed the meridian of Greenwich, from which I had proposed to myself to reckon our longitude westward during the whole of the voyage, as we were to sail around the globe from east to west. On the 27th, at nine *p. m.* we saw the Eddystone light; and about eleven o'clock, as we were but a short distance from the place of our destination, I shortened sail, and we stood off and on under our topsails until day break, when we saw the coast of Cornwall at a short distance ahead of us. We soon after saw St. Ann's, the eastern point of the entrance to Falmouth, and Pendennis Castle, which is the westernmost. At eight o'clock we anchored in the Carreck road, where we found the *Neva*, which had arrived two days earlier. Our westward anchor we cast in seven, and our eastward one in fifteen fathoms. The castle on the point of St. Maw's bears S. S. E. $\frac{1}{2}$ E.

I immediately sent Lieutenant Löwenstern to the governor of the castle to announce our arrival, and to ask him, whether he would answer our salute with an equal number of guns? He sent me word that he would without fail. The next morning we saluted the castle with nine guns, and an English frigate,

which lay here, with seven ; and she, as well as the castle, returned shot for shot.

My only object, in running into this port, was to provide the ships with a quantity of Irish salt meat, as I feared that neither the Russian, the Hamburg, nor the Danish would keep, for three years. I intended to take a supply for six months on board both ships, as the want of room did not allow my laying in a larger stock. I had the Nadeshda, too, caulked here, as during the bad weather in the north sea the water had penetrated considerably through her sides.

As I was obliged to put into some English port, I gave the preference to Falmouth before either Portsmouth or Plymouth, and had reason to be satisfied with my choice, as we found here a plentiful supply of every thing which we wanted. We have particularly to thank Mr. Fox, a merchant of that place, for providing us so well, and I must do him the justice to say, that he treated us very liberally. We met, too, with great attention from General Cowell, who commanded the troops of the district, as well as from Lord Rolle, colonel of a militia regiment, which I cannot sufficiently esteem. During that time of uneasiness, England then appearing to be threatened with an invasion, they had fixed their residence here.

Falmouth possesses, notwithstanding its small size and the meanness of its houses, all the properties of an English town, which cannot fail to make a pleasing impression upon a foreigner. The difference, however, between this and the towns that I had an opportunity of seeing in the north-east part of

England, was very striking. The comfort of the lower class of inhabitants, which distinguishes England so much from the other countries of Europe, appeared here in some degree to fall off. It seems to me that the employment of the poor people, which chiefly consists in working the mines, is the cause of this want of comfort: the breeding of cattle is not much followed in Cornwall, and there are few other articles of commerce than minerals. However, as I did not go inland, and conclude generally upon that which I saw in the town, my opinion may perhaps not be quite correct.

Falmouth harbour is roomy and excellent. Large ships lie in the Carreck road, about a mile from the town. The packet boats which, as is known, sail from hence to America, the West Indies, and Lisbon every month, lie in front of the town. Their situation is perfectly secure, and there is no example of a ship having ever broke from her moorings. The anchorage ground is sand, under which is hard clay. One must, however, be careful with the flood, which sets in from the S. S. E. to heave out a second anchor, in order not to be driven on a steep bank, which lies to the northward of St. Maw's, near to which the westernmost anchor should be in seven fathoms water.

CHAPTER III.

PASSAGE TO THE CANARY ISLANDS AND BRAZIL.

The Ships leave Falmouth—Observe an extraordinary Meteor—Arrival at Teneriffe—Stay there—Remarks on Santa Cruz—Inquisition—Unbounded Authority of the Governor General of the Canary Islands—Astronomical and Nautical Observations at Santa Cruz—The Nadeshda and Neva sail to the Brazils—The Island of St. Antonio—Remarks on the Passage to the Equator—Fruitless Search for the Island of Ascension—Opinions on its Existence—Perceive Cape Frio—The Situation of this Promontory—Storm off St. Catherine's—Anchor between St. Catherine's and the Brazils.

THE wind was now favorable, and I waited with considerable impatience for M. Resanoff, who, at length, arrived at Falmouth early in the morning of the 5th. The same day we sailed at high tide from Carreck road with a fresh northerly breeze, which in a few hours veered to the eastward. At eight *p. m.* the lighthouse on the Lizard bore N. W. 38°, distant from us about twelve miles. At nine we lost sight of it, and at ten I altered my course from S. S. W. to W. S. W. The wind blew fresh without making much impression on the ship. The night was as fine as it could possibly be, clear and not a cloud to be seen. All the officers remained upon deck until past twelve. This beautiful night, on our entering the ocean, appeared to every one a good omen for our long voyage. To whom could this thought, this wish, which did not arise from any idea of personal danger, be so important as to me! I fancied that the eyes of the civilized part of Europe were fixed

upon me. The success or failure of our undertaking was to decide my reputation, and the latter would cast a shadow on my name, which would in some degree be extended to my country. Those who delight in censuring and vilifying Russia would have triumphed over an unfortunate event, and the first attempt, if it had failed, might for a long time have prevented any similar undertaking. The difficulties of the task I had in hand now struck my mind with greater force than ever, and at last I was only able to quiet my uneasiness by reflecting on the grounds which had induced me to engage in the voyage. It was my duty not to withdraw myself from an undertaking which, (I may here openly repeat it,) it had been said, would fall entirely to the ground, unless I undertook the charge of it; and for this reason it was my duty to obey. At the moment when I could no longer perceive the light upon Cape Lizard, I was overwhelmed by feelings which I had not the power to resist. I could not think of my wife, whose tender love for me was now the source of so much uneasiness, without the greatest affliction. At length these painful sensations gave way to the hope that the voyage would certainly have a successful issue. The idea, that I should increase the reputation of my country; the prospect, too, of that happy hour in which I should again see the darling of my heart and my child—these ideas restored me to firmness and composure.

The officers had been hitherto divided into three watches. I now gave the fourth to M. v. Löwenstern, to whom I would gladly have given one upon our departure from Cronstadt; but the lateness of the season, and the dangerous navigation of the east and north sea, rendered it necessary that there should be

more officers in every watch. As we were now in the open ocean, clear of all dangerous coasts and rocks, I made this alteration. I wished, too, to have divided the crew into three watches; but as it consisted of only fifty-six men, of whom eight did not keep watch, I deferred doing so until we should fall in with the trade-wind. There were hitherto no sick on board; for the food of my men was the very best which can be had at sea. Since we left Cronstadt, that is, in the space of nine weeks, they had had salt meat but eight or nine times; during the rest of the time the crew had always had fresh, or newly salted meat; they had besides beer every day, and while we lay at Cronstadt and Copenhagen fresh bread, and such a quantity of vegetables that their broth, in the opinion of all the officers, was more palatable than that of their own table. At Falmouth, too, I had laid in a quantity of cabbages, potatoes, carrots, and onions, sufficient for several weeks, so that my men now wore a much better appearance than when they came on board. Of clothes and linen, as well for warm as cold weather, they had an ample provision, and it gave me great pleasure to see an inclination to cleanliness in all of them. I examined them twice a week, took notice of their linen and clothes, and particularly of the cleanliness of their persons. One serious remonstrance which I made the first time to a few of them had its effect, and from thenceforward I never perceived any reason to find fault with them on this ground. I had therefore every cause to hope that I should be so fortunate as to preserve the health of my people.

I kept rather a more westerly course than is usually taken, to avoid Cape Finesterre, where, in all probability, we should

have fallen in with some English or French ships of war, which would have delayed us. The wind blew very fresh at S. E. and E. so that we seldom ran less than eight or nine knots.

On the 8th October we were in $44^{\circ} 25'$ latitude, and $12^{\circ} 08'$ longitude. The change of temperature in twenty-four hours was four degrees, that is to say, it had risen to 14° .^x We observed almost every evening the well known phenomenon, the illuminated sea, some spots appearing to be much brighter than the rest, and it seemed to be a composition of nothing but shining sparkles. On the 10th October we had a lunar observation, according to which, the longitude reduced to midday was $13^{\circ} 30' 15''$; by Arnold's chronometer it was $13^{\circ} 45' 45''$; our latitude was $38^{\circ} 40' 10''$. At eight this evening we saw a very extraordinary meteor. A fire-ball, which was so bright that the ship was quite lighted up by it during the space of half a minute, rose in the S. W. and ran in an horizontal direction towards the N. W. where it disappeared. The inflammable matter was so strong that a broad clear line was visible in the same direction a whole hour afterwards. Dr. Horner measured the height of this line from the horizon, and found it to be 15° , its width about 4° . It was near Sagittarius that Dr. Horner first saw it rise, and it vanished near the northern crown. These fiery meteors are, indeed, often seen; but that a light line should be so long visible in their course has perhaps not been so frequently remarked. Our latitude at the time was $37^{\circ} 40'$, our longitude $14^{\circ} 05'$.

The next day we lost our fine east wind, which we had hoped

would have held until we fell in with the trade-wind. Towards evening it became perfectly calm. The clouds were very black above the horizon; distant thunder and lightning announced a storm, which came on towards one in the morning, but did not last long. In about an hour the weather again cleared up, and the wind sprung up fresh from the W. S. W. and continued to blow from that quarter for some days, accompanied by a heavy sea from the S. W. On the 13th we had another calm, and I took this opportunity to lower the boat, in which Drs. Horner and Langsdorff put off to try the temperature of the sea with Hale's machine. The warmth of the air was 18° , on the surface of the water it was $19\frac{1}{4}^{\circ}$, and at the depth of 95 fathoms, where the thermometer remained 18 minutes, 19° . The water at this depth, examined with a microscope, was perfectly clear.

As the weather had been very damp for some time past, I made the men light a fire in their birth almost daily, and hang out their clothes and beds to dry, whenever there was any appearance of sunshine. On the fifteenth, in the night and following day, the ship was considerably tossed about by a heavy sea, which set in from the N. W. although there was scarcely any wind. We saw a number of large fish of the dolphin species, about twelve or fifteen feet long, swimming round the ship, some to the S. W. others in an opposite direction. At five *p. m.* the wind shifted towards the N. E. and blew pretty fresh; but the sea still set so strong from the N. W. that we made no more than four knots an hour; nor did this roll of the sea abate until the next day.

As we were now approaching the place of our destination,

I allowed the men a cask of fresh water to wash their linen. I mention this otherwise insignificant circumstance, to shew the great economy necessary with the fresh water on board ship. Every man was suffered to drink as much as he pleased; but I never suffered a drop to be taken for any other purpose, without my express permission.

On the 18th, at noon, we had an observation in $30^{\circ} 08' 15''$ latitude, and $15^{\circ} 01'$ longitude. About five in the afternoon the Savage islands were seen from the mast head, bearing N. N. E. distant about twenty-two miles. At half past six the next morning we distinctly saw the island of Teneriffe, and at seven the Pic cleared itself of the clouds in which it had been enveloped until then, and appeared to us in all its majestic grandeur. As its summit was covered with snow, and was extremely brilliant from the reflection of the sun, this contributed very much to the beauty of the scene. On either side, to the east and west, the mountains, which nature seems to have destined to sustain this enormous mass, appeared gradually to decline. Every one of the mountains which surround the Pic, would be considerable in itself; but their height scarcely attracts the attention of the beholder, although they contribute to diminish the apparent size of the Pic, which, if it stood alone, would be much more striking.

I now steered for the N. E. point of the island, but the wind blew so hard at E. that I had very little hope of coming to an anchor this day at Santa Cruz. In the afternoon we perceived a French frigate between us and the Neva, which had an opportunity of speaking with her. There was nothing to recommend

her in her outward appearance, which, on board our ship, was the subject of severe criticism: but we learned at Santa Cruz, where she also put in, that she was not a ship of war, but belonged to an individual, who had fitted her out as a privateer, and that she had already made several prizes, which were to be sold there. In the evening, about five o'clock, we were very near Punto de Nago, the eastward point of Teneriffe; but as great caution is necessary in anchoring at Santa Cruz, I determined to stand off and on during the night between the islands of Teneriffe and Canary, and the next morning, at eleven, we sailed for the road. Don Carlos Adam, lieutenant of the Spanish navy and captain of the port, came immediately on board, and recommended us to keep to the eastward of the road as the best place to anchor, where we brought to in thirty-six fathoms water. The ground is not so rocky here as it is in other parts of the road, nor are there so many lost anchors on the ground, which are frequently the occasion of other ships being obliged to leave their own.

The Neva, which lay more to the S. W. lost a sheet anchor and two cables, owing to this cause, while the Nadeshda's cables did not suffer in the least. It is, however, necessary to take the precaution of buoying them up with casks to keep them floating in the water: I would recommend this situation in preference, notwithstanding the great depth of water, and will therefore give the exact position of the ship after we had let go our other anchor to the N. E. in twenty-four fathoms water. Punto de Nago, the N. E. point of the road, bore N. E. 69°; the S. W. point of the island S. W. 36°; and the church of St. Francis, which is distinguished by a very high

tower, S. W. 51° 30'. There is indeed this disadvantage attending the situation, that should a storm spring up at S. W. and a ship not like to ride it out in the road, it would be very difficult for her to beat out. Violent storms, however, are not common even in winter, and if the anchor and cable can be depended upon, it is better to remain in the road. The Spaniards indeed moor with four anchors, two to the N. E. and two to the S. W.; but in this they stand alone, and perhaps only do so, because of an ancient law which obliges them to it.

As soon as the ship had let go her anchors, I sent my fourth lieutenant, M. von Löwenstern, to the Governor, to request his permission to complete our water, and to lay in a stock of fruit and wine for the voyage, a request which he very politely acceded to. As I knew several instances of English ships of war offering to salute the fort, and meeting a refusal to return the compliment with an equal number of guns, and of many of them having, besides, received a mortifying answer, I would not expose the Russian flag, which now waved here for the first time, to the affront of being refused that which it had a right to demand, and therefore said nothing on the subject.

At four in the afternoon the Deputy Governor (Teniente del Rey) came on board with one of the Governor's secretaries to congratulate the ambassador, who had already been on shore, and the officers of the ship, on their arrival. An hour afterwards I went on shore with Captain Lisianskoy, and some of the officers of my ship, to wait upon the Governor, the Marquis de la Casa Caligal. He was a very polite man, and disposed to afford us every assistance that we might stand in need of;

and he had the goodness to give up the house belonging to the Grand Inquisitor, which had a belvidere, to our astronomers. Dr. Horner immediately sent two chronometers, a sextant and stand, and a false horizon there; but he could not avail himself of this house, as the tower was not steady; and he only succeeded, with difficulty, in taking a few good altitudes for the determination of the latitude and longitude by the watches. He could not, however, make any uninterrupted observations to regulate their rate of going.

On the day that we arrived, a packet came in from Corunna, and brought the Governor an order to give us a favorable reception. He delivered to us a copy of this order of the King's, that in case we should arrive at any of the Spanish possessions before the similar one which had been sent to them, we might be certain of being well received.

Although the Governor had offered to provide us with every thing, I rather preferred applying for what we wanted to Mr. Armstrong, a merchant of this place, to whose partner in Orotava, Mr. Barry, I had letters. He supplied both ships with all that we stood in need of, and without his assistance we should certainly have been detained a longer time here, and even then have not been so well provided. His hospitality equally claims our thanks. He received the ambassador into his house; and whoever, belonging to the ship, called there, was kindly received, found a well provided table, and a pretty large party; which, with the amiable manners of Mrs. Armstrong, and some young French ladies from the Isle of

France, rendered our stay, in this otherwise dreary and melancholy place, very agreeable. Dancing, playing, and good humour are not very common among the serious Spaniards. Such are the strange and imperfect notions which foreigners have of Russia and the Russian nation, that they seemed astonished to find that these Hyperboreans could bear a comparison, and not a disadvantageous one, with the most cheerful inhabitants of the south of Europe, while in education and good breeding they were by no means behind them. The officers of both our ships fully confirmed this opinion.

It was my intention not to have remained here more than two or three days, but my agent gave me no hopes of getting away under five. M. von Resanoff determined therefore to go, with the naturalists belonging to the ship, to Laguna and Orotava, to visit a botanical garden, which the Marquis de Nava had formed at the latter place. Several plants from tropical countries, but particularly from South America, have been transplanted to this garden, to accustom them to a more temperate climate, in order that they might afterwards be removed to Spain with a better chance of growing there. This admirable plan does great honour to the patriotic feelings of the Marquis de Nava, who has expended upon it a part of his very considerable property. At first it met with the King's approbation; but the attention which it deserves is now no longer bestowed upon it. Another object of this journey of our naturalists was to see a large dragon-blood tree (*sanguis draconis*) in the neighbourhood of Orotava, the trunk of which, ten feet above the ground, was thirty-six feet, and near the root forty-five feet, in circumference.

Santa Cruz is by no means a handsome city, but it is not unpleasantly situated. The houses are large and very roomy within; the streets narrow, but well paved. On the beach the late Governor, the Marquis de Branciforte, made a public walk, consisting of some rows of trees, at the expense of the inhabitants, to which they have given the name of Alameda. As it is, however, scarcely a hundred fathoms in length, it does not answer the purpose very well; besides, there is a sentinel at the entrance, who frequently turns away those who wish to enjoy it, notwithstanding it was made at the public expence, and is kept up in the same manner. Mr. Barry, the merchant, although he resides in Orotava, is obliged to pay one hundred piastres yearly for this purpose; as I was assured by Mr. Armstrong. In the great square there is a well sculptured marble pillar, erected in honour of the Virgin Mary de la Candelaria. It is adorned with emblematic figures, which are said to be the work of a skilful statuary. The Guanches,* I was told, had found, at the time of the conquest of the island, the virgin Candelaria, with a crucifix in her hand, in one of the caves, of which there are several in the mountains. This wonder, which perhaps, the first conquerors found necessary, in order to persuade the poor Guanches to adopt the Christian religion, certainly deserved to be commemorated at the end of a philosophical century with so much pomp and talent! Opposite to this pillar is the fort of St. Christopher's, where Lord Nelson in the last war, when this too daring hego attempted the conquest of Santa Cruz, lost his right arm, and Captain Bowen

* The Guanches were the original inhabitants of Teneriffe. The race is now extinct.

his life. It would have been more proper, I should conceive, to have eternized by an obelisk the memory of that victorious day, when the brave inhabitants of this island obliged the courageous Nelson to retreat, than, by erecting this monument, to endeavour to give the stamp of truth to an absurd fable.

The general misery of the people, depravity in the highest degree of the other sex, and swarms of fat monks who stroll about the streets as soon as it is dark; these are the characteristics of Santa Cruz, and strike the stranger, unaccustomed to such sights, with pity and disgust. There is no place in the world where so many horrid objects are to be seen. Beggars of both sexes and of all ages, clad in rags, and afflicted with every kind of disgusting complaint, fill the streets, together with lewd women, drunken sailors, and lean and deformed thieves. I am almost tempted to believe, that the lower class of inhabitants here, have all an equal propensity to stealing. A person might fancy himself transported to one of the islands of the South Seas; for he is robbed in spite of the greatest attention and precaution. Whenever a boat came along side the ship, some theft was infallibly committed in the presence of the whole crew, and I was at last obliged to prevent any body from coming on board.

The Inquisition is introduced here as in all the possessions of the Spaniards, and, as I was assured, in all its vigour; its chief residence is in the island of Canary. It must be miserable indeed for a free spirited man to live in any place where he is exposed to the caprice of the Inquisition, and of a governor who has an unlimited power of life and death over every citi-

zen. Until now, the governors of Teneriffe, who are at the same time viceroys of the Canary islands, had not this unlimited authority; but Mr. Armstrong told me that this increase of power was brought over to them by the packet which arrived at the time we did. I could not learn what had induced the government to take this step. Indeed, such unbounded power in the hands of an enlightened and liberal minded man, as the Marquis de Cahigal was said to be, would not be dangerous; but who can assert that some despotic minion may not at a future period fill this station! An idea may be formed of the liberty of the citizen here, by the circumstance that no man dare go into the roadsted, even to pay a visit, without the permission of the Governor.

The season was already considerably advanced; but we found here an abundance of grapes, peaches, citrons, oranges, melons, onions, and potatoes: every thing was, however, extremely dear. Even the price of wine had risen very much within a few years; for I paid ninety piastres the pipe for what used to be but sixty. This wine is very good, and improves on a long voyage, although it is by no means equal to Madeira. As the bad kind of wine was but fifteen piastres cheaper than the best, I bought only the latter for the use of the men. The brandy which is made here is very bad, and is only used in Spanish America, as it would not be drank in Europe.

- Beef was dear, and cost eight pence sterling the pound; for a very moderate sized sheep we paid seven piastres, and for a fowl one. To all these prices must be added at least twenty per cent. commission. Every cask of water cost us likewise one piastre.

The mean of the several observations which were taken in the road, made the latitude of our anchorage to be $28^{\circ} 27' 33''$ N. The longitude by Arnold's large watch, No. 128 = $16^{\circ} 12' 45''$ W. The true longitude, as settled by the Chevalier de Borda and M. Varila - - - - - $16^{\circ} 15' 50''$ W.

On the 27th October, No. 128 was earlier than mean time at Santa Cruz - - - - - 0h. 24' 56".

Its daily rate of going - - - - - +11' 4".

No. 1856 was, on the 27th October, earlier than mean time at Santa Cruz - - - - - 0h. 0' 7".

Its daily rate of going - - - - - -7" 5.

Pennington's watch at the same time was earlier than Santa Cruz - - - - - 0h. 07' 17".

Its daily rate of going - - - - - +5" 3.

The mean of several results of mid-day and circum-meridian altitudes, which Dr. Horner took on the house belonging to the Inquisition, made the latitude of this house, which may be considered as the center of the town - $28^{\circ} 28' 20''$ N.

The longitude by No. 128 - - - - - $16^{\circ} 13' 42''$ W.

The variation of the compass by the mean of several azimuths taken with two different compasses, was - = $16^{\circ} 01' 30''$.

In the year 1792 it was - - - - - $16^{\circ} 32' 00''$.

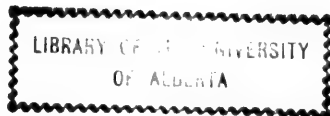
Dr. Horner made no observations on the dip of the needle, because as I intended to have sailed from hence some days earlier than I afterwards found it possible, I did not send the inclinorium on shore. The attempts, indeed, made by La Perouse have proved that no satisfactory result is to be expected from any observation here, which he ascribes to the quantity of iron contained in the soil of Teneriffe. The ther-

mometer was at the highest on the day of our departure, rising to 22° ; during our stay here it had never fallen below $19\frac{1}{2}^{\circ}$. The barometer had varied very little, seldom more than two-tenths of a line. Its ordinary height was 29in. 90, and 29in. 92. By the observations which De Fleurieu instituted here in 1769 upon the ebb and flood, the time of high water is at three o'clock in new and full moon. The tide rose twelve feet in the syzigia, and six feet in the quadratures.*

About six in the evening of the 26th October, we received the last supply of necessaries on board; but as it was dark, and the land wind had not yet sprung up, I determined not to sail this evening, and I did so the rather as I learned that the Governor intended to come on board the next morning. At nine o'clock we had the pleasure of a visit from him, accompanied by a pretty considerable suite of civil and military persons. On his quitting the ship I saluted him with nine guns, and the fort returned this compliment with a like number.

About twelve at noon, on the 27th, we weighed with a pleasant southerly breeze. A cartel for Gibraltar set sail at the same time, as did a Spanish ship which had arrived that morning from Malaga, and was destined to the Rio de la Plata. The captain of the latter vessel wished to have landed his sick, but the Governor would not permit him, and he was obliged to proceed on his voyage in this melancholy condition.

* Voyage fait par ordre du Roi en 1768 et 1769, par M. d'Eveux de Fleurieu, tom. I. p. 288.





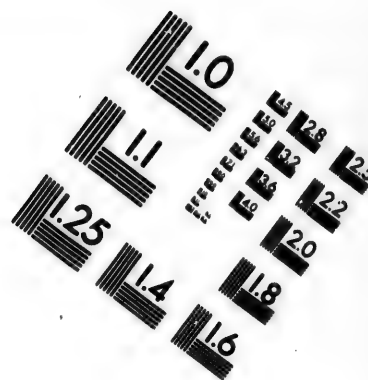
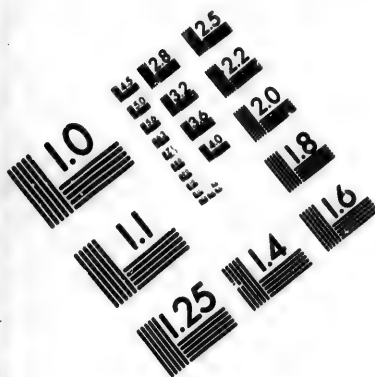
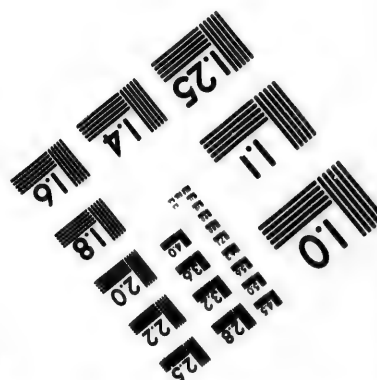
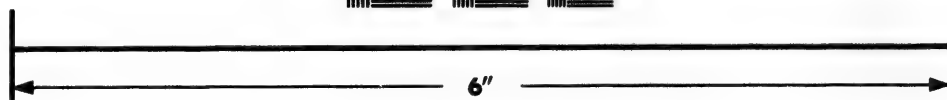
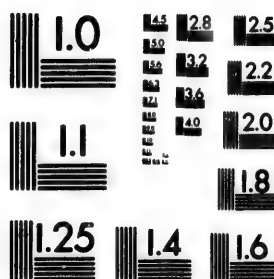


IMAGE EVALUATION TEST TARGET (MT-3)



Photographic Sciences Corporation

**23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503**

18 20 22 25
E E E E
E E E E

01
ii
ii
ii
ii

The farther we sailed from Santa Cruz the more the wind got to the westward; in the evening it shifted to the N. E. blowing directly off the land; but it did not hold in this quarter longer than till the next morning, when it again veered to the south. I steered the whole night S. S. W. as long as the wind permitted. The next morning the S. W. point of Teneriffe bore N. W. 35° , our latitude at that time being $27^{\circ} 07'$. Towards evening the wind became westerly, drawing more and more to the northward. At six the next morning we still saw the Pic from the deck; it bore by compass N. E. $15^{\circ} 30'$, that is, allowing for the variation, which is here 16° W.; N. W. $0^{\circ} 30'$. At noon we had an observation in $26^{\circ} 13' 51''$ latitude, and $16^{\circ} 58' 25''$ longitude. Between six in the morning and noon we had lessened our latitude $21' 54''$, and increased our longitude $19' 15''$. The ship was consequently at the time we saw the Pic in $26^{\circ} 35' 45''$ latitude, and $16^{\circ} 39' 10''$ longitude; and as, according to Borda and Pingré, the Pic lies in $28^{\circ} 17'$ N. latitude, and $19^{\circ} 00'$ W. longitude of Paris, or $16^{\circ} 40'$ of Greenwich, we must have seen it at six o'clock at the distance of 101 miles, and due north of us, in which direction it in fact bore. In very clear weather the Pic may be seen 25 miles farther off from the mast head; but this is the greatest distance which it is visible even from that height, and under the most favorable circumstances. The elevation of the Pic has been determined by several observations. Borda's calculation, which is founded on a geometrical admeasurement, and is conceived to be the most correct, makes it 1905 toises, or 11430 feet.

I steered S. W. by W. and shortly after W. S. W. as I wished

to keep clear of the Cape de Verd islands, and not see any of them, except the island of St. Antonio. The Spanish ship, which had sailed with us from Santa Cruz, we lost sight of towards the N. E.; the weather was cheerful and fine, the wind at N. W. I had the cables cast off from the anchors, in order to dry them thoroughly and stow them away; and I divided the crew into three watches, and although fifteen men were, considering the size of the ship, too few for active service, I trusted to the weather and the steadiness of the trade-wind. During the remainder of the voyage however, even with the most unfavorable weather, the men continued in three watches.

On the 2d November, with a gentle northerly breeze, the sea rolled so high from the N. W. that the ship was very much tossed about by it, and we concluded that a very heavy storm had been raging to the N. W. near the Canary islands. The wind varied between N. N. W., N. and N. E.

On the 6th November, at day break, we perceived the island of St. Antonio at the distance of from 25 to 28 miles. As the wind was moderate, I held directly to the westward, to keep still more away from the land, as calms are very frequent in the neighbourhood of lofty islands. At noon we had an observation in $17^{\circ} 55'$ latitude. The S. W. point of the island bore at that time S. E. 24° , distant about 45 miles. I now steered W. S. W. and as the wind freshened towards the evening, S. W. by W. The next day at noon the S. W. point of the island St. Antonio bore 86° , distant about 54 miles; and I again held S. S. W.

The mean of a variety of lunar observations taken this morning, made our longitude, reduced to mid-day, $26^{\circ} 17' 07''$. By the watches it was $26^{\circ} 24' 40''$. I reckoned the longitude of the S. W. point of St. Antonio by Arnold's large timepiece, No. 128, the best of our Chronometers, $25^{\circ} 24' 00''$. The variation of the needle we found to be $15^{\circ} 06' W$.

The passage to the westward of the Cape de Verd islands certainly deserves the preference over that to the eastward; as experience has shewn to all navigators, that to the westward a fresh trade-wind prevails, while to the eastward there are frequent calms. Indeed, very few examples exist of navigators sailing between the Cape de Verd islands and the coast of Africa. I should therefore recommend all those who, on their passage to the equator, take the westward course, to steer in such a direction from the Canary islands, as to cross the parallel of 17° , or the parallel of the island of St. Antonio in $26\frac{1}{2}^{\circ}$, even in the 27° of longitude, and then to steer S. E. by S. directly to the equator. By this means they will entirely avoid these islands, which are of sufficient magnitude to alter the direction of the trade-wind, for it frequently happens that S. W. winds are met with here. Even if this should not be the case, the wind is always very moderate in their vicinity, and it cannot therefore be of much hinderance to steer $1\frac{1}{2}^{\circ}$ more to the west than the course lies, when it is with the certainty of keeping a steady wind. If however it be necessary to have sight of the island St. Antonio, in order to correct the ship's reckoning, this may be done at a distance of 30 miles. At all events, especial care must be taken not to come within 20 or 25 miles of it, as there is otherwise a danger of being

driven, either by storms or by calms, too near the land. As I was going to the Indies in the year 1797, on board the English line of battle ship the *Raisonable*, we experienced the danger of sailing too near this island; and even in this voyage we were made aware of its vicinity, for in the night, previous to our seeing Antonio, it suddenly became calm; but as soon as we withdrew from the land, the wind freshened. Although we had lost sight of the island, and were in 27° of longitude, the wind blew very moderately from the south and east. I waited now with impatience for the true N. E. trade-wind, that I might return to the eastward, which I proposed to do for about 20° , in order to keep clear of the southerly winds and strong eastward currents, which are found in the regions between the N. E. and S. E. trade-winds, and I wished, too, not to cross the line more to the westward than the 24° or 25° of longitude. Ships have been driven, when crossing the line in a more westerly direction than the 25° and 26° , by strong currents and a too southerly trade-wind, so near the coast of Brazil as not to be able to clear Cape St. Augustin. If the wind, however, will allow the passage of the line in the 20° or 21° , a ship must not fail to do so, as she has then the advantage of a directly free wind as soon as the S. E. trader sets in, and, of course, of getting quicker to the southward. This, however, is rarely possible.

Our naturalists made several experiments to-day to ascertain the cause of the sparkling of the sea, the result of which seemed to prove that it is not merely occasioned by the motion of the water, but is in fact produced by organized beings. They took a dish, over which they spread a fine cloth doubled,

and poured the water on it, as it was taken out of the sea. It then appeared that several spots remained on the cloth, which glistened as soon as it was shaken, while the water which had passed through it did not seem in the least impregnated with phosphorus, although mixed with sawdust, to replace the want of the matter, which was now separated from it, and might have been supposed to have given the sparkle to the water when in motion. Dr. Langsdorff, who examined these fiery bodies with a microscope, and has made drawings of several of them, found them to be, particularly the larger ones, in the form of crabs, and in the small ones he observed fibres, evidently denoting organization. But as this experiment with the microscope was not made until the next morning, it still remained uncertain whether these animalculæ were alive at the time of emitting the light, or were already in a state of putridity; nor could we ascertain the exact influence of the atmosphere on the brilliancy of these insects, as they are not every day of an equal brightness, or whether this does not perhaps arise from a greater or less degree of electricity in the air, or is only produced by the friction occasioned by the motion of the ship, and does not exist when the water remains in a tranquil state. At the end of this work will be found an ample treatise on this subject by M. Tilesius.

On the 10th November, in $13^{\circ} 51'$ N. latitude, and $27^{\circ} 07'$ W. longitude, we fell in with the N. E. trade-wind. It was still, however, considerably to the eastward, namely, E. by N. and E. N. E. We held, therefore, as much as we were able to the S. E.; and this was the more necessary as we had to work against a strong current, which threw us back nearly 20 miles

a day. On the 15th at noon, when we were in latitude $6^{\circ} 58'$ N. and $21^{\circ} 30'$ W. longitude, the whole sky became overcast. About two we had some rain and a squall of wind, that continued with considerable violence during two hours. Throughout the night it was very thick with little wind. We now found ourselves on the borders of the trade-wind, which after this squall we had entirely lost, and entered into the regions where are found unsettled, and, for the most part, directly contrary winds, calms, or constant violent squalls, accompanied by heavy showers and a hot damp air, as oppressive as it is injurious to the health. Several days passed in which we did not get sight of the sun, so that the men could neither dry their clothes nor bedding. The thermometer was constantly between 21° and 23° , the air damp and sultry; yet with all the uneasiness this occasioned me for the health of my people, I had not a single invalid during the whole of this time. Every possible precaution, indeed, was adopted: I had fires lighted three or four times a week in the hold, which were kept in during several hours, and which is undoubtedly an excellent method of drying and purifying the air. At Teneriffe I had laid in such a stock of citrons, potatoes, and pumpkins, that our supply was not exhausted even on our arrival at St. Catherine's. Instead of brandy I gave the men a pint of the best Teneriffe wine, and in the morning and evening I had some weak punch made very sweet, but at the same time with a great deal of citron juice mixed in it. We availed ourselves of every moment of sunshine to dry and air the clothes and bedding. The constant rain, during which we had caught enough water for a fortnight at least, gave our people a good opportunity to

wash their clothes; and I had a large awning spread, entirely for their use, between the fore and main masts. It was, indeed, not a little amusing to see fifteen or twenty men together under this awning, which looked like a little lake, washing one another, after they had first washed their clothes and linen. The heat, too, did not appear to affect them so much as I expected. The thermometer was seldom much under 23° , and yet many of the sailors would ask, when the hot weather was to come on? so much had they been told of the extraordinary heat. Our Russians therefore seem capable of bearing either extreme, and to think no more of 23° of heat than they do of a like degree of cold.

This disagreeable heavy weather continued during ten days, in which time we had only advanced about 2° to the southward; for we had to struggle against a very strong current, that drove us back daily about 15 or 18 miles. At the end of the ten days we had again a fresh north wind, which lasted nearly twenty-four hours, when it veered to the S. E. and settled in that quarter as the true trade-wind; we were now in 2° N. latitude, and 23° W. longitude.

On the 22d November we saw a ship steering (close hauled) to the eastward. I conceived she was going to Europe, and wished to take this opportunity of writing to Russia. I sent an officer with my letter on board. She had, in the mean time, hoisted American colours, and I learned she was destined for Batavia.† Notwithstanding his voyage was to the southern hemisphere, the captain kept my letter with a promise to for-

ward it to Europe from the Cape of Good Hope, where he was to put in.* His longitude was very different from ours, being more than 3° too westerly, which had induced him to hold so much to the eastward. I sent him the longitude given by our watches, with the assurance that he might fully depend upon it; but he did not alter his course, and sailed all night in company with us; the next day we, however, nearly lost sight of him.

On the 26th November we crossed the equator at about eleven in the morning in $24^{\circ} 20'$ W. longitude, after a passage of thirty days from Santa Cruz. Under a salute of eleven guns we drank the health of the Emperor, in whose glorious reign the Russian flag first waved in the southern hemisphere. The usual farce with Neptune could not well be represented, as there was nobody on board the ship, except myself, who had crossed the equator. One of the sailors, however, who had a talent for spouting, and was rather a wag, was adorned with the trident to welcome the Russians on their first entrance into a strange boundary; and he played his part as well as if he had long been devoted to the sea-god.

I now directed my course towards the island of Trinidad; the wind was, however, so much from the southward, and the current at the same time set so strong to the west,† that we had crossed the meridian of Trinidad in 7° of S. latitude. The

* This letter reached its destination punctually in the month of May, 1804.

† The direction of the currents, from the equator to the eighth degree of latitude, was S. W. by W. and W. S. W. running from 26 to 35 miles a day.

wind soon freshened and got more to the eastward, so that we made a rapid advance, and I steered as much to the southward as it would permit. The westerly current still flowed indeed ; but it had much less force than near the equator. In 14° latitude we lost the S. E. trade-wind, and had E. winds, which by degrees veered to N. and N. W. During the whole time that the trade-wind lasted, we were accompanied by an infinite number of bonitos, and harpooned some of them almost daily. They made a fresh and palatable dish for our people. We caught but one shark, part of which was eaten, although it was not so good as a bonito. Our Japanese, however, ate the head, and seemed to relish it much.

La Perouse spent several days in searching for the island of Ascension, (on the existence of which so many different opinions have been entertained during the last 300 years,) between the parallels of $20^{\circ} 10'$ and $20^{\circ} 50'$ S. latitude as far as 7° W. of Trinidad, but without falling in with it. He had therefore justly entertained some doubts upon its existence, and whether it might not be one and the same with the island of Trinidad, as it is said to be in the same latitude ; an opinion which had already been maintained and combated by many. Frezier, for example, in the account of his voyage to the South Sea, blames the celebrated Halley for leaving the island of Ascension out of his charts, and affirms, that he had himself landed upon it, although it was the island of Trinidad, as Halley, in the defence of his chart, very clearly demonstrates. As many opinions, however, were still in favour of the existence of this island, I resolved to sail some degrees more to the westward than La Perouse, in order to place its reality beyond a doubt,

or to increase the probability of its non-existence; and I felt myself the more called upon to attempt this enterprize, as the editor of La Perouse's voyage appears to throw some blame on that navigator for not having sought longer for the island of Ascension, and affirms, that he dropt the search at the moment when he must have been near it. Milet Mureau grounds his assertion in the first place on this: that Daprés has determined the longitude of Ascension to be 38° W. of Paris, and that Perouse did not sail so far; secondly, in that he had lately met with a French naval officer, M. Lépine, who, in 1791, had touched at both islands, and had found the latitude of Trinidad to be $20^{\circ} 22'$, that of Ascension $20^{\circ} 38'$. Lépine was not, indeed, provided with instruments to determine the longitude of Ascension, but had stated its distance from the coast of Brazil to be 120 leagues, or 360 Italian miles. This last authority appeared to me of importance; yet it struck me as singular, that Lépine, even though he were unprovided with astronomical instruments to determine the longitude, should not have given the public some information concerning an island, on whose existence so many disputes had been maintained; and particularly, whether it bore any resemblance to the description and the charts given of it by Daprés, Dalrymple, and several others. It would then only have been necessary to have followed in the parallel of $20^{\circ} 38'$ until we had met with it.

On the 7th December, at noon, we were in $19^{\circ} 47'$ latitude and $32^{\circ} 24'$ longitude, that is to say, 21° more to the eastward than La Perouse had gone in search of Ascension. I could therefore sail through the night without fear of missing the

island, and held my course in such a direction, that, at day-break, I must have got into the latitude given by M. Lépine, when I intended to steer a direct westward course. At noon we had an observation in $20^{\circ} 47'$; a current had driven us some miles more to the southward than $20^{\circ} 38'$; but the weather was so very clear, that we must infallibly have seen 12 or 15 miles even from the deck. An island, lofty as that of Ascension is said to be, must surely have been seen at double this distance from the mast head, and it was impossible to have missed it, had it been in this latitude. In the evening, at about seven, I laid by; the ship's latitude then being $20^{\circ} 41'$, her longitude $35^{\circ} 36'$. At day-break I continued my course under all sail to the westward. At noon we had an observation in $20^{\circ} 46' 51''$ latitude, and $36^{\circ} 19'$ longitude. The Neva was about three miles more to the northward. My attention was excited to the highest degree, and I expected to hear every moment from the mast-head, that land was to be seen; but in vain. In the evening, about seven, I gave over all farther search for this island. The ship's latitude was then $20^{\circ} 42'$, her longitude $37^{\circ} 00'$ from Greenwich, or $39^{\circ} 20'$ from Paris. We had now therefore sailed $2^{\circ} 10'$ more to the westward than La Perouse, and $1^{\circ} 30'$ in the same direction more than Daprés has given, as the longitude of Ascension. As, during this search, I had never departed more than nine miles to the southward of the given latitude of this island, as will be perceived by the foregoing account, I can venture to assert, that the island Ascension is not to be found between the parallels $21^{\circ} 10'$ and $20^{\circ} 30'$ to $37^{\circ} 00'$ W. of Greenwich, and that its distance cannot be more than 220 miles from the coast of Brazil. It appears to me therefore very problematic, whether M. Lépine really did touch

at this island : and, in case he did, its latitude has certainly not been correctly given by him. This is scarcely to be expected from a French naval officer. Without absolutely deciding for the omission of this island from the charts, I must be allowed to remark, that La Perouse had much more right to doubt its existence, than the editor of his voyage so positively to maintain the contrary.

I left the re-discovery of the island of Ascension to a more fortunate navigator, and steered for Cape Frio, of which I wished to get sight, to assure myself thoroughly of the latitude of this promontory. After having examined the latest charts and voyages, I found, to my no small astonishment, that the different latitudes assigned to it vary from $23^{\circ} 06'$ to $22^{\circ} 34'$. By the work called "*La Connaissance des Temps*," it has been for many years fixed at $22^{\circ} 02'$, as well as by the "*Dictionnaire Maritime of Grandpré*." In the original account of Lord Macartney's embassy, the latitude of this Cape is given at $32^{\circ} 02'$; but this is evidently a misprint for $23^{\circ} 02'$. This is, indeed, the most correct determination.* The French translator of Lord Macartney's voyage has but ill corrected the mistake by changing $32^{\circ} 02'$ into $22^{\circ} 02'$, and from this translation the fault in the "*Connaissance des Temps*," and in Grandpré's work, probably arose. No one would have ventured to give the latitude of Cape Frio thus at random, during thirty-five years, if Cook,

* Captain Broughton makes the latitude of Cape Frio $22^{\circ} 59' 41''$ and $41^{\circ} 53' 18''$ W. In Mendoza's tables, which, as well as Broughton's journal, were both published since my departure, the latitude of Cape Frio is set down $22^{\circ} 54'$, and its longitude $42^{\circ} 08' 15''$.

in the account of his first voyage, had more expressly mentioned it; nevertheless, by consulting the astronomical observations which Wales has published on the voyages of Byron, Wallis, and Carteret, as well as on Cook's first voyage, it would have been found, that, on the 12th November, 1768, the day on which Cook perceived Cape Frio, the latitude at noon was observed to be $23^{\circ} 06'$; and as Cook expressly says, that he, on this day, sailed to Rio Janeiro along the coast, which lies nearly east and west, the latitude of Cape Frio could not possibly be very different from that of noon. For my own part, I had no doubt that the latitude must be $23^{\circ} 02'$, as Sir Erasmus Gore had determined it to be, and as it nearly must have been by what I have stated of Cook's first voyage. I had hopes, however, of being able to determine it within a few minutes, if we should succeed in getting within the parallel of this promontory, at the time the sun was in the meridian.

On the 11th December we had an observation in $22^{\circ} 36'$ latitude, and $40^{\circ} 40'$ longitude. In the evening, about seven o'clock, I sounded, and found 50 fathoms water over a rocky bottom. At day-break we saw the island of Frio, which lies near Cape Frio, and is easily distinguished by a deep valley which divides the island into two equal parts, so that at a distance it might without difficulty be taken for two islands. At noon the middle of the island of Frio bore due west, precisely as I wished; but the sky was so overcast, that the sun was not visible, and my endeavours were of course frustrated. In the afternoon the weather cleared up, and the ship had scarcely any motion. Under these favorable circumstances, twelve azimuths of the sun were taken to determine the variation of the

compass, which was from $2^{\circ} 21'$ to $3^{\circ} 06'$; the mean is therefore $2^{\circ} 49'$ E.

On the 13th December we were by observation in $23^{\circ} 11' 45''$. Cape Frio bore N. W. $53^{\circ} 20'$, distant from 25 to 30 miles. Assuming this as the distance, the latitude of Cape Frio would be $22^{\circ} 57' 30''$ S.; but I do not consider this as to be depended on, being founded on such very uncertain data. The longitude of Cape Frio, I conceive to have been better determined. By the rate of the largest Arnold watch, No. 128, reduced from St. Catherine back to the 13th December, the longitude of this Cape will be $41^{\circ} 32' 00''$ W.; by the true longitude, as taken on this day, $41^{\circ} 36' 30''$.

In the evening, at seven o'clock, I took my point of departure from Cape Frio, which, at that time, bore N. W. 10° , 18 or 20 miles off. I now held my course directly for St. Catherine's: the weather was delightfully clear with a fresh wind at N. E. so that on the 16th in the evening, at about eight o'clock, we had ground with a line of 40 fathoms. I tacked during the night, and the next morning we saw the islands of Alvaredo and Gal. The weather was thick and gloomy, and prevented our seeing the island of St. Catherine's. Having no detailed chart of this coast, nor any views of the islands lying at the entrance to St. Catherine's, and, consequently, not being able to determine whether what I saw was Alvaredo and Gal, I could not venture between these rocky islands, but steered, in the hopes that the meridian of the sun would remove my uncertainty, to the northward. The observation, however, failed at noon, and the weather continued thick, with heavy rain and a

fresh wind. I was therefore obliged to remain in the vicinity of the coast, in expectation of clearer weather.

On the 18th we were by observation in $26^{\circ} 53' 39''$ S. and this induced me to steer a southerly course, near enough to the land, to have a distinct view of the bays and rocky islands lying along it, which must certainly afford the most beautiful harbours, and cannot fail to be known to the Portuguese, although I very much doubt whether any accurate survey of the coast of Brazil has ever been made by them. The charts we found at St. Catherine's, of the island and of the coast to the northward, had no great claims to accuracy, although one of them was made by the Portuguese geographer, Lopez; and others, even in the current year, by a Portuguese engineer. In the first, the astronomical designations were incorrect; and in the others, though they entered into minute details, and appeared to have been made with great attention, they were wanting altogether. The chart No. 5. in the Atlas, gives a correct draught of the north entrance to the anchorage, between the island of St. Catherine and the main land, as well as of the islands which lie in front of this entrance, and of the small portion of the coast to the north of the island, which, during the last few days, we had an opportunity of seeing. These charts, perhaps, will not be considered as quite superfluous, as I never saw any similar ones, except No. 57 in the second volume of Bellin's collection, "Le Petit Atlas Maritime," which however is very incorrect.

About four in the afternoon the wind subsided entirely, and the sudden falling of the barometer announced a storm. The

nearness of the coast gave me at first some uneasiness: the wind, however, rose from the land with a violent thunderstorm and rain, and blew so hard as to compel us to take in all sail, except the storm and foresail. The next day at noon the wind again abated and enabled us again to set our topsails. I once more steered towards the coast, which we saw at day-break of the 20th, and found that the southerly current had driven us so much to the northward, as to oblige us to beat up the whole day to fetch the island of Gal. Towards evening we saw a boat pulling off to us, and I lay by to let her come along-side. There were some Portuguese in her, who offered to take us between the islands of Alvaredo and Gal; a passage which, after the warning given by La Perouse, I should not have ventured, although it shortens the way very considerably. We however found it safe, as a ship may approach both islands without any danger. The depth of the road diminishes gradually to 5 fathoms, in which soundings we anchored at five o'clock in the evening of the 21st, on a clayey bottom. Fort Santa Cruz on the island Atomery bore N. W. 10° , the center of the island Atomery N. E. 35° . The island of Ratones S. E. 15° , and Ponta Grossa N. E. 66° . Our distance from Santa Cruz was one, from St. Miguel five miles.

CHAPTER IV.

STAY AT ST. CATHERINE'S.

Reception at St. Catherine's and Occurrences there—The Observatory set up on the Island of Atomery.—The Masts of the Neva found to be bad—Prolonged Stay at St. Catherine's—Remarks on the Fortifications towards the Sea, on the Town of Nuestra Senhora del Destero, and the Troops there—Miscellaneous Observations on the State of this Colony, its Trade and Productions—Refreshments which the Navigator finds there, and Prices of them—English Privateer—Nautical and Astronomical Observations.

WE had no sooner cast anchor than an officer came on board from fort Santa Cruz to welcome us, and the next day we had the pleasure of a visit from the commandant himself. As I wished to make my stay here as short as possible, I went this same morning to the town of Nuestra Senhora del Destero, which lay about 9½ miles south of our anchorage. As this place is the residence of the Governor, I conceived that our wants would be the soonest supplied there. The Governor, Don Joseph de Carrado, colonel of the Portuguese army, whom I waited upon with Captain Lisianskoy and some of the officers of the ship, immediately on our arrival, received us with great politeness. He promised, with the greatest kindness, to afford us every assistance in his power; he sent a sergeant on board of both ships, who was placed entirely at our disposal; had a list made out of the provisions we wanted, and directed an officer, for the more speedy procuring them, to

purchase them in the interior of the island and on the main land. He ordered wood to be cut for us; a request which I particularly made to him, as this employment would have been very laborious, under the extreme heat, and might prove injurious to the health of the seamen. He allowed us to erect our observatory on the little island of Atomery; an object of the greatest importance, as well to enable us to determine the rate of the watches, which in all three had varied very much since we left Teneriffe, as to facilitate the observations which Dr. Horner proposed to make on the southern hemisphere.

After the conclusion of this business, which, owing to the extraordinary kindness of the Governor, was arranged so much to my satisfaction, I returned on board. The ambassador and his suite remained on shore, the Governor having given up half of his house to him, and appointed a country-house which he possessed, at a short distance from the town, in a very pleasant situation, for the use of his suite. On my return to the ship, I saluted fort Santa Cruz with thirteen guns, which compliment it returned with the same number; and on the same day the commandant with some of his officers dined on board my ship. I sent an officer on shore to discover a suitable place to complete our water and repair the casks, and there could not be a more convenient one than that which he selected for this purpose, called San Miguel, a small village, in a most picturesque situation. From a beautiful cascade, the water, which is excellent, is conveyed by pipes to a rice-mill, which is but seldom worked. In three days, a ship may with the greatest facility complete her water, even though she required 100 tons; the only inconvenience being the distance, which is five miles; but

with a large barçaça, this is not much felt. Dr. Horner established his observatory the same day on the appointed spot. The work on board the ships went on with the greatest diligence; and I had a good prospect of being able to continue my voyage in ten days, when a notice came from Captain Lisianskoy, which deprived me of all my hopes. The main and foremast of the *Neva* were found to be so bad, that Captain Lisianskoy was obliged to remove them entirely. In a place where no trade is carried on, and where, consequently, there are no people to supply the wants of shipping, this appeared to present insurmountable difficulties, and must, but for the attentive zeal of the Governor, have detained the *Neva* several months. As no masts are kept ready made here, the Governor sent into the neighbouring woods where the finest trees for the purpose may easily be met with. The chief difficulty in procuring them was in the transport of these heavy bodies from the woods to the shore; and notwithstanding every assistance on the part of the Governor, this vexatious, as well as unexpected, affair delayed our voyage five weeks.

Circumstances of an unpleasant nature made my stay on board the ship almost constantly necessary, and prevented my obtaining any accurate knowledge on the state of this colony. It cannot, however, escape any one's notice, even though he should not have the advantage of verbal communication with the enlightened part of the Portuguese residing here, that the cabinet of Lisbon, either from a policy undoubtedly erroneous, or from an indolence which is still more unpardonable, neglects this possession in an uncommon degree. How much Portugal mistakes the advantages that she might derive from her colo-

nies in this part of the world, is a fact too well known to need repetition. Of the whole of Brazil, the island of St. Catherine, with that part of the main land adjoining it, has perhaps the least attracted the attention of the Portuguese government, much as it deserves it, on account of its situation, its healthy climate, fruitful soil, and valuable productions.

The island, which is separated from the main land by a strait about 200 fathoms wide, lies in a N. N. E. and S. S. W. direction; is 25 miles long, and about 8 or 9 wide, except in some parts where it is not more than 3 or 4 miles wide. The N. N. E. extreme lies, by our observations, in latitude $27^{\circ} 19' 10''$ S. and longitude $47^{\circ} 49' 20''$ W. of Greenwich. From Frezier, I believe, we have the first accounts of this island, as well as the first chart, which is pretty correct. Lord Anson was the next to give the public any information upon it. Lozier de Bouvet touched here in 1738, and in 1785 the unfortunate La Perouse. In the eighteen years which have elapsed since this last period, no material alteration appears to have taken place. At present, the very extended road is protected, as it was then, by three insignificant forts, namely, Ponta Grossa on the western side of St. Catherine's, Santa Cruz on the island Atomery, and a small fort of nine guns on the island of Ratones; but of these nine guns three only were in a serviceable state. Fort Santa Cruz is the most important, and as our observatory was erected here, we had an opportunity of viewing it. The faults of this work, which Monneron* points out in some of his letters, are perfectly grounded. I counted only twenty guns here, which,

* Engineer on board La Perouse's ship.

for the most part, appear to be in very bad condition; the garrison scarcely amounted to fifty men. Any nation that should undertake to get possession of this colony, might do it as easily as the Spaniards did in 1777, without so large an armament: yet the impossibility of establishing a durable colony here, without having at the same time possession of some part of the adjoining coast, will deter any one from attempting so useless a conquest. The town of Nuestra Senhora del Destero is still worse fortified: a small fort of eight guns at the landing place, the carriages of which were nearly all rotten, constituting its only defence. The small battery, *en barbette*, which Monneron likewise mentions as situated at the entrance of the strait, now no longer existed. The garrison consists of about 500 men, who, notwithstanding the quantity of valuable diamonds and the 20 millions of crusades which are annually sent from the Brazils to Lisbon, have for several years received no pay, a striking proof of the imbecility of the government. In order, however, to secure the garrison against starvation, every soldier receives for his daily maintenance twenty reis, or the thirty-seventh part of a Spanish piastre.* They are, however, very well clothed, owing probably to the care of the Governor and the commander of the regiment; the government, to judge from the manner in which it remits their pay, not having the least share in it. The commandant of the garrison was a descendant of the celebrated Vasco de Gama; and by a privilege enjoyed by this family, one of its descendants, so long as St. Catherine's has a military establishment, is entitled to the command of the troops there. In the year 1785, when

* 750 reis make a Spanish piastre.

La Perouse touched at this island, Don Antonio de Gama, one of this family, was military commandant.

The town, which is very pleasantly situated, consists of about 100 ill-constructed houses, and is inhabited by 2000 or 3000 poor Portuguese and negro slaves. The Governor's house and the barracks are the only buildings distinguished, by their appearance, above the rest. They were at this time building a church, which in many catholic countries is thought much more of than either hospitals or any other useful building. I was not a little surprised at seeing one evening about ten o'clock, as I was going on board, several negro slaves of both sexes carrying stones for this purpose; but my astonishment diminished in some degree, when I considered that the reward of this religious zeal belonged less to them than to their masters.

The government of Don Joseph de Carrado stretches from Rio Grande in latitude 39° S. and longitude 54° W. to the settlements of St. Paul, in $23^{\circ} 33' 10''$ S. and $46^{\circ} 39' 10''$ W.

My endeavours to obtain an accurate account of the population of this government failed; but it must be very inconsiderable, as the coast only is inhabited, and the people are exposed to the attacks of the natives, as happened even during our stay there. These attacks are not however attended with any bloody consequences; the natives are content to plunder, and carry off particularly the cattle belonging to the Portuguese.

On the main, as well as in the island, the soil is remarkably

fruitful. Excellent coffee and sugar are cultivated here. The rum is not equal to that of Jamaica; but my own experience has convinced me that it improves by age and travelling, and yields then in nothing to the rum of Saint Cruz. But as foreign ships are only allowed to purchase for ready money, and none of the inhabitants of this government are permitted to send their produce to Europe, the prospect of selling it falls entirely to the ground. Where the market is overstocked, industry must naturally be checked; and they only cultivate therefore sufficient for their own use and to enable them to send yearly one or two small vessels of about 70 to 80 tons to Rio de Janeiro, to barter inland productions against European goods; for the inhabitants of these parts receive only from Rio de Janeiro the most indispensable articles of life. The price of coffee and sugar at the time of our stay here was ten ceps the pound, and that of a gallon of rum was less than half a piastre. It is easily understood that a still lower price would be paid for these articles if purchased in large quantities and under other conditions. They have the finest specimens of wood here in abundance, and I collected a set of more than eighty different species, which, on account of their colour and strength, would form an important article of exportation: but this is absolutely prohibited. The Prince Regent has, indeed, in order to bring this government into repute, declared the island a free port, but with various restrictions, which oppress trade, and make this pretended benefit appear in a very ridiculous light, as the chief produce of the soil, timber, cannot be exported on any terms, and the others only for specie. It is not likely that any ship should come from Europe to St. Catherine's to purchase coffee, sugar, and rum for ready money; and I doubt

very much whether on the whole island, and the neighbouring coast, sufficient would be found to load a ship of 400 tons. Besides, as the inhabitants are forbidden to export their produce to any other place than to Rio Janeiro, their trade remains, as formerly, in the most miserable condition. The most necessary articles, which might be manufactured here in the greatest abundance, such as soap, tar, &c. are so scarce, that on our arrival the inhabitants would only spare us provisions in exchange for them. Upon landing, the sassafras tree and the oleum ricini, the plant from which castor-oil is extracted, are seen every where in the greatest abundance; and yet Dr. Espenberg was unable to procure even a very small quantity of this oil, although he had particularly reckoned upon getting some here. My carpenter, whom I had sent out in search of spars for planks, found trees, at a distance of only two miles from St. Miguel, fit for masts for the largest ships. I have already said that not a single merchant is to be found in the town of Nuestra Senhora del Destero; and yet if a few were to establish themselves here under the protection of the government, they could not fail, with a tolerable share of enterprising spirit, however small the capital they might set out with, not only of securing considerable profits to themselves, but of producing the most beneficial effects to the cultivation of the soil; and they would soon find themselves in a condition to send several richly laden ships to Portugal. The Prince Regent may withdraw from St. Catherine's the privilege of being a free port, if he will but grant to the inhabitants of these parts a little more liberty of commerce. A free port without a free trade is a contradiction, of which unluckily they do not seem aware. The whale-fishery, which within these few years has again be-

come a monopoly of the crown, would afford another rich branch of profit, were it only carried to the extent of which it will admit. But so long as the Portuguese government shall proceed on the contracted plan which it has now adopted, it is impossible that the revenues of these colonies should amount to half the sum necessary for the payment of the troops and law officers ; and on this account it is that the greatest misery prevails in them.

Ships going round Cape Horn, or destined for the whale-fishery upon this coast, cannot desire a better harbour than St. Catherine's to run into. It is infinitely preferable to Rio Janeiro, where strangers, particularly if they arrive in merchant ships, are treated with the same insulting jealousy as in Japan. Even Cook and Banks were exposed there to insults, the very relation of which cannot fail to excite disgust. In St. Catherine's, in the vicinity of which there are no diamond mines, a stranger enjoys perfect liberty : the harbour is excellent, the water very good and easy to be procured. Fire-wood may be felled free of expense, and for what is ready felled, and the vender himself brings on board, a charge is made of ten piastres the thousand ; every log of which is upwards of three feet long. The climate is particularly healthy. Our people, after a residence of seven weeks here, were all perfectly well ; during the first days, indeed, several of them were seized with a violent cholic, which lasted only a few hours, and then disappeared entirely. The heat, even in January, the hottest summer month, is quite tolerable ; the thermometer on board the ship never rising above 22°, and the constant fresh sea-breeze diminishing the heat still more. Provisions and fruits of all descriptions

are here both cheap and abundant. We purchased, for example, an ox weighing 400 lbs. for eight piastres; a hog weighing 200 lbs. for ten; and for five fowls we paid one piastre. The season was still too early for oranges and lemons, yet we had them by thousands for a mere trifle. Water melons and pumpkins were in the greatest plenty. Of fish indeed we found a great scarcity; but the season, owing to the heat, was unfavorable for fishing, which is accounted a very profitable employment, except in the summer months. The only vessels used for this purpose are canoes, hollowed out of a single tree, of which some are more than thirty feet long, and only three feet wide: owing to this narrowness, though they row with great rapidity, they cannot venture to sea in rough weather.

On our arrival here we found an English privateer with two French prizes, which had been destined for the whale-fishery. The commanders, Americans by birth, had, in the general opinion, which the Governor himself agreed in, given up the ships of their own accord to the Englishman, who, contrary to the law of all civilized nations, had taken possession of them under the guns of fort Santa Cruz. This act of the Americans appeared so base, that we gave little credit to the accusation, until an order came from the Viceroy for their seizure, that they might be delivered up to the French government, which convinced us of the reality of their crime. The English privateer had, in the full expectation of a war between his own country and Spain, taken a vessel belonging to the latter nation, and not only brought his prize into St. Catherine's, where he had privately sold the effects with which it was laden, but had fitted the vessel out with sixteen guns, and anchored her as a guard-ship in the

Portuguese roadsted, to examine every ship that arrived. The commander of this Anglo-Portuguese guard-ship carried his imprudence so far as to send his boat on board a Portuguese ship of war which arrived there, a brig of eighteen guns, to put the usual questions on such occasions to her captain, who was not a little surprised at being examined under the guns of a Portuguese fort. The brig had been sent by the Viceroy to St. Catherine's to take possession of the whole squadron of English privateers. The Spanish prize, thus fitted out as a guard-ship, escaped, as well as one of the French ships, and the privateer only, with his other prize, fell into the hands of the Governor.

I shall conclude the unsatisfactory account of this place with some nautical and astronomical observations which we made here. The entrance is as easy as possible. The islands Gal and Alvaredo are not to be mistaken: the first, which is the smallest, and lies most to the northward, is particularly remarkable by its long white streaks on the steep side, as well as by two small rocks, which lie at the N. E. extremity. At the distance of about nine miles the depth is thirty fathoms, and gradually decreases. Coming from the northward, it is best to steer between the islands Gal and Alvaredo, leaving the small rocky island San Penedo, which lies three and a half miles W. N. W. of Alvaredo, on the right. A S. S. W. and S. W. by S. course leads directly to fort Santa Cruz. The anchorage is perfectly safe every where, whether to the north or southward of this fort; yet it is better to anchor to the southward of Santa Cruz, as well on account of the communication with the town, as of the vicinity to San Miguel, where the best

water is to be procured. Coming to St. Catherine's from the southward, you steer between the island of Alvaredo and St. Catherine's. The passage is perfectly safe. If the wind should be contrary, a ship may work in without danger, for close to St. Catherine's there are four fathoms water, and the coast of Alvaredo is equally deep.

The observations on the ebb and flood tides were made on the island of Atomery, where the observatory was erected by Dr. Horner. The following are the remarks which he communicated to me on this subject.

The ebb and flood are here very unsettled, and depend entirely on the wind. The flood sets in from the N. the ebb from the S.; and as the wind is almost always from the sea, the ebb, with a fresh northerly wind, is scarcely apparent, and seldom lasts more than two or three hours. The time of high water at full and new moon was, by a mean of several observations, found to be 0h. 49'. The water continued sometimes at its height for three or four hours together, during which no change whatever was perceptible, either in its increase or decrease. The lowest tide we had was, on the 27th January, one day after the full moon, with a fresh N. wind; and the highest tide, which rose 3 feet, was two days after the full moon, with a very moderate N. E. wind. A southerly wind kept the water up above an hour.

Dr. Horner found the polar elevation of the observatory, where he had fixed a quadrant, by a mean of several meridian altitudes of the sun - - - - - $27^{\circ} 21' 58''$ S.

The longitude by a mean of several lunar observations, by Dr.

Horner and myself - - - - - $48^{\circ} 00' 00''$ W.

Arnold's large watch, No. 128, by its rate of going at Teneriffe,
made the longitude of the observatory - - $47^{\circ} 51' 00''$ W.

Arnold's small watch, No. 1856 - - - - - $48^{\circ} 52' 45''$ W.

Pennington's watch - - - - - $48^{\circ} 09' 35''$ W.

By several observations which Dr. Horner made almost daily with a transit telescope at his observatory, on the culmination of the sun and stars, as also by the corresponding altitudes of the sun, he found that the loss of No. 128 in its rate of going had increased $9''$, and was still increasing; that the daily acceleration of No. 1856 had increased $5''$, but that its rate of going since these observations, had continued the same; namely, on the 24th January, 1804, at noon, No. 128 was too late for mean time at fort Santa Cruz - - - - - $2\text{hrs. } 25' 38'' 5$.
It lost daily on the 24th January - - - - - $+18'' 00$.
On the 3d February it was already - - - - - $+24'' 00$.
On the 27th October, 1803, it was, at Teneriffe, only $+11'' 40$.
On the 3d September, at Copenhagen - - - - - $+8'' 42$.
On the 8th July, at St. Petersburg - - - - - $+9'' 37$.
In April, in London - - - - - $+4'' 88$.
No. 1856 was too early for mean time at fort Santa Cruz, on the 24th January, 1804 - - - - - $3\text{hrs. } 29' 32'' 5$.
Its daily increase was at this time - - - - - $-14'' 94$.
On the 27th October, at Teneriffe - - - - - $-7'' 50$.
On the 3d September, at Copenhagen - - - - - $-5'' 56$.
On the 8th July, at St. Petersburg - - - - - $-7'' 51$.
In April, in London - - - - - $-2'' 60$.

Pennington's watch was, on the 24th January, too late for mean
time at fort Santa Cruz - - - - - 3hrs. 16' 26".
Daily loss - - - - - +7' 11.
On the 27th October, at Teneriffe - - - - - +5' 30.
On the 3d September, at Copenhagen - - - - - +1' 83.
On the 8th July, at St. Petersburg - - - - - +5' 21.
In April, in London - - - - - +0' 70.
The variation of the needle, which Frezier, in 1712, found to
be 10° E. we found, by a mean of two compasses = 7° 50' E.

CHAPTER V.

DEPARTURE FROM BRAZIL AND ENTRANCE INTO THE GREAT
OCEAN.

The Nadeshda and Neva sail from St. Catherine's—New Orders issued to Captain Lisianskoy—Character of the Japanese on Board—Strong Current by the Rio de la Plata—Perceive Staatenland—Weather Cape St. John—Longitude of this Cape—Reach the Meridian of Cape Horn.

ON the 22d January the Neva received her fore-mast, and on the 25th her main-mast. Day and night the crews of both ships were employed in getting her ready for sea; and on the 31st, Captain Lisianskoy notified to me that he should be prepared to sail on the 2d February. On the 1st I unmoored, conveyed the observatory to the ship, and sent my boat for the ambassador, who, during the whole of this time, had remained in the Governor's house, where he had been received with the greatest hospitality. On the 2d February the ambassador came on board, accompanied by the Governor and several of his officers. The guns of all the three forts fired the moment the boat hove in sight. This politeness to the ambassador, I returned on my part, by saluting the Governor on his departure with eleven guns.

From the long stay we had been obliged to make at St. Catherine's, I feared a stormy passage to Cape Horn, owing to the very advanced state of the season. I had intended to have

doubled this promontory in the month of January, which could not now be done earlier than March; it was therefore necessary to make all possible haste, and to avoid every delay, even though we should be separated. At our departure from Cronstadt I had settled with the Neva, to make port St. Julian on the coast of Patagonia, and Valparaiso on the coast of Chili, our places of rendezvous. These it was now necessary to alter, and I wrote an order to Captain Lisianskoy to cruize, in case of our separation, for three days off Cape St. John, the eastern point of Staatenland, and if he should not see the Nadeshda in this time, to continue his voyage to the harbour of Conception, where he was to wait for us fifteen days. In the event of our being separated beyond Cape St. John, and that he, on the 12th of April, should have advanced more to the northward than 45° , and to the westward than 85° , he was then to make for port Anna Maria, in the island of Nukahiva, one of the Washington islands, and there wait ten days for me. But if, on the 12th April, the Neva should not have reached the parallel of 45° , and the meridian of 85° , which supposed a long and difficult navigation, Captain Lisianskoy was to make for port Conception, take in, with all convenient speed, a supply of water and refreshments, and then steer directly for the Sandwich islands, but not without touching at the group called Washington islands, and inquiring after the Nadeshda in port Anna Maria.

I had resolved upon giving the preference to port Anna Maria, over that of Madre de Dios in the island of Santa Christina, because, from the report of Lieutenant Hergest, this harbour seemed to unite every advantage: besides, as neither

the island, nor any part of the group lately discovered by the Americans, had been examined, either by the discoverers, or by any European ships which might have seen them since Captain Ingraham, I thought it of consequence to obtain some information about them.

A strong northerly wind prevented us from sailing on the 3d February. It blew so hard that there was apparently no ebb at all, and I had no hopes of being able to work out of the harbour and get to sea. The same happened during the morning of the 4th; but about half past three in the afternoon, a violent thunderstorm arose with a strong southerly wind. I immediately made the signal for sailing, and about four, both ships were under weigh. A boat which I had sent off for water, about an hour before the shift of the wind, still detained us, and it was not until six in the evening that we weathered the N. N. E. point of St. Catherine's, between which and the island Alvaredo I had taken my course. At seven this point bore by compass S. W. 75° , distant about six miles. From this cape, which, by our observations, lay in latitude $27^{\circ} 19' 10''$ S. and longitude $47^{\circ} 49' 20''$ W. I took my point of departure.

Throughout the night and the next day we had very unsettled weather, with constant rain and a strong southerly wind, by the help of which, and by steering in an easterly direction, we got so far from the land, that at twelve the next night we could not strike ground with a line of fifty fathoms. The wind now veered round to E. S. E. I therefore instantly put the ship about, and steered along the coast S. by E. With the shift of

the wind the weather cleared up, and we already saw some storm birds, though as yet only in the 28th degree of latitude. At eight in the afternoon we sounded, and met with a clayey bottom in sixty-five fathoms water. I therefore steered one point more from the land, namely S. S. E. On the 7th February, the clearness of the weather allowed us to make several lunar observations. Mine, reduced to noon, gave, by the Nautical Almanack, $46^{\circ} 34' 15''$; by the Connoissance des Temps $46^{\circ} 52' 30''$ W. The watches gave $46^{\circ} 30'$. The latitude at noon was $30^{\circ} 16' 40''$ S. The variation of the needle was this day $11^{\circ} 02' E$.

I began from this day forward to portion out the water to the ship's company. The allowance for every man, without distinction, from the captain to the sailor, was two quarts daily. To the Japanese only, I allowed a larger quantity; yet they alone complained of an arrangement, which, owing to the uncertainty of the duration of our voyage to the Washington islands, which might last four months, I considered as absolutely necessary. During the voyage I had frequently found cause to be very much displeased with our Japanese, and it is scarcely possible to imagine worse people than they were. Although I treated them with particular kindness and attention, and bore their selfish humours with a patience at which I was myself surprised; yet this good treatment, certainly unmerited on their part, had not the least effect on their boisterous character. Lazy, dirty in their persons, always ill-humoured and passionate in the highest degree;—these were the leading features which distinguished them. An old man of sixty years of age formed the only exception, and he differed in every

respect from his countrymen, and was alone deserving of the Emperor's favour in sending them back to their country. They would never do any work, not even when their assistance might have been of advantage to themselves. With the interpreter, who however was just as bad as the rest, they lived in a continued state of warfare, and several times swore aloud to be revenged on him, and for no other reason, than because he was rather more noticed by the ambassador than the others.

The wind gradually veered from E. S. E. to N. N. E. and I steered quite a southerly course. It blew very fresh, sometimes with gusts of wind and rain, and then again with fair weather. We advanced rapidly towards the south, and on the 9th February were already in latitude $34^{\circ} 38' 16''$. The longitude by our watches was $47^{\circ} 30' W.$ At two o'clock in the morning Lieutenant Golowatscheff, who kept the middle watch, observed a curious ripple of the water occasioned by a current. It formed a line stretching N. N. E. and S. S. W. as far as the eye could reach, and was throughout lighted up so strong, that, according to his description, it had the appearance of a fiery furrow. This was the true limit of the current, which, since our departure from St. Catherine's, had carried us fifteen miles a-day to the S. W. This day at noon our observations shewed a difference of seventeen miles N. N. E. $\frac{1}{2}$ E. in the dead reckoning. This alteration in the current is probably owing to the vicinity of the Rio de la Plata, from which we were now 240 miles in an easterly direction, and the next morning, by which time we had completely passed the mouth of this river, the current set thirty-two miles in the same direction as the preceding day, that is to say N. E. $28^{\circ} 30'$. We

had mostly favorable weather, and generally a fair wind. In the 37° of latitude we saw the first albatross,† and several birds of the species of storm birds.‡ In the 40° of latitude we saw several large pieces of seaweed,○ which are generally conceived to denote the vicinity of land, from which we were however 600 miles off. The variation of the needle increased gradually, and on the 17th January, in latitude $44^{\circ} 15'$, and longitude $56^{\circ} 50'$, we found it by a mean of four sets, each of six observations, made with two compasses, and which varied from $15^{\circ} 11'$, to $20^{\circ} 4' 40''$ of each other, to be $17^{\circ} 37' 50''$ E. On the same day we had several lunar observations; a mean of four sets, each of five observations, gave me $56^{\circ} 55' 25''$ as the longitude. By the same number of observations Dr. Horner made it $57^{\circ} 05'$. The timepieces at the same moment made it $56^{\circ} 40'$.

On the 18th and 19th February we had a violent north wind, with heavy drizzling weather, which was followed by a great thunderstorm and a thick fog, so that for several hours we could not see the Neva. At nine in the evening it cleared away, and we had a fine bright night. As I had made some alterations in the fog-signals I lay by, and sent our boatswain on board the Neva. During this time we hove the lead over board, and found a bottom of grey sand with black spots, with a line of eighty-five fathoms. Captain Lisianskoy at the same time made known to me that he had sounding in fifty fathoms. At twelve at night we could not strike ground with a line of seventy fathoms. As we had no altitude of the sun at noon, Dr. Horner determined the latitude by the culmination of Sirius and the α of Orion to be at eight o'clock $48^{\circ} 03'$; our

longitude, by the observations made the day before with the timepieces, reduced to this moment by the ship's reckoning, was $62^{\circ} 33'$; by the last lunar observation it was $62^{\circ} 50'$. At ten o'clock at night Dr. Horner calculated the longitude by some altitudes of the Aldebarans to be by our watches $62^{\circ} 44'$.

I cannot neglect this opportunity of mentioning Dr. Horner's unwearied diligence in determining, at all times, the latitude and longitude of the ship, when the common observations failed. If the sun did not shine in the day time, we were sure at night that he would give us our latitude and longitude. I have often seen him in the coldest and most unpleasant weather, particularly off Cape Horn, waiting, a sextant in his hand, with the most unwearied patience, to catch a glimpse of the sun between the clouds, and my requests, that he would desist from his frequently useless exertions, were seldom attended to. There were very few days during the whole of this voyage in which the true longitude of the ship was not calculated by an observation of the heavens.

I caused the lead to be hove regularly two or three times a-day until our arrival off the coast of Staatenland, the depth we usually found was between sixty and seventy fathoms, over grey sand, with black and some shining spots, and we sometimes met with fine black and yellow sand.

On the 21st February, after a fresh breeze which had lasted about six hours, the Neva made the signal of having sprung her main-topsail yard, and that she must replace it with a new

one. I lay by while this accident was repairing, which was completed about six o'clock, when we again made all sail. The variation of the compass was found to-day to be $21^{\circ} 40'$ E. The ship's latitude at the time was $49^{\circ} 43'$, her longitude $65^{\circ} 13'$. The wind in the night shifted to the westward, and as we were pretty nearly in the center between Falkland islands and the coast of Patagonia, neither of which it was any object to see, I steered directly S. by E.; but the sea ran so high from the southward, that the ship was very much retarded by it. Nevertheless as I could not afford to lose this wind, I set all possible sail. This heavy sea, which could not be alone ascribed to the high wind of the day before, which was but of short duration, together with the lowness of the barometer, which stood at 29 *in.* 35, seemed to portend a storm from the southward; the wind however was not very fresh, and yet when we got opposite the great bay of St. George, the sea had become very rough. On the 23d February the weather was so fine that I had Hales's machine put over board. The temperature of the air was 12° Reaumur, on the surface of the water the thermometer stood at 10° , and at the depth of 55 fathoms, where the machine remained 10 minutes, $8\frac{1}{2}^{\circ}$. The whole depth of the water at the time was 75 fathoms. On this day we saw upwards of twenty whales, swimming two and three together, and some of them came so near the ship, as obliged them to turn that they might not be sailed over. Captain Lisianskoy came on board, and I informed him that it was my intention, in case it could be done without much loss of time, to come to an anchor, for one day, at Easter island; I wished not only to ascertain the rate of our watches, but to learn whether

La Perouse's beneficial intentions in leaving sheep, goats, and hogs for the inhabitants had been fully answered.

On the 24th February, I reckoned myself, by our observations, about ninety miles from Cape San Juan, the eastward promontory of Staatenland. Conceiving it to bear S. S. E. of us, I steered S. E. under all sail, to see the land before sunset, that I might choose a sure course for the night; but the wind fell, and our hopes were frustrated. About seven o'clock I took in all sail and steered E. under double-reefed topsails. At five the next morning we had sight of the whole coast of Staatenland, trending from S. to S. E. at a distance of from thirty-five to forty miles. The land formed nearly a straight line, lying E. and W. and appeared to consist entirely of pointed hills, separated from each other by deep hollows, and cut sharp off by the sea. To the westward we perceived a promontory, stretching towards the N. and having the appearance of a stumpy rock cut down vertically. This I took to be Cape St. Diego, the eastern extreme of Tierra del Fuego, as also of the northern entrance of strait Le Maire. There was an astonishing number of whales, which came so near as to alarm the officer of the watch, before day-break, by the noise they made in spouting up the water, who fancied we were near breakers. Although the wind was very favorable for us to have passed through strait Le Maire, I thought it better to sail round Staatenland, the violent currents in the strait being often very dangerous to shipping, as the experience of many navigators has shewn; and the advantages, on the contrary, but very trifling, since, the only wind which will carry you through it, soon

brings you back the short distance to the westward, which you lose by steering an easterly course round Cape St. John.

At eleven this promontory lay, as much as we wanted it, in a true southward direction. As the fine weather and clear horizon allowed us to take very accurate observations, I shall here set down the longitude of Cape St. John, as given by our watches, and compare it with the observations made by Captain Cook and other navigators. By the rate of the watches, determined by Dr. Horner, from a series of observations made during our long stay at Santa Catharina, the longitude of Cape St. John was, according to

No. 128	- - - - -	63° 42' 30".
No. 1856	- - - - -	63° 49' 45".
Captain Cook	- - - - -	63° 47' 00".
Captain Bligh	- - - - -	63° 18' 00".
Arrowsmith, probably after Malespina	- - -	63° 40' 00".
By the watches on board the Neva, per signal		63° 47' 00".

If we therefore reject Captain Bligh's observation as varying nearly half a degree from that of Captain Cook, the greatest difference in the longitude of Cape St. John, according to the observations of Captain Cook, Malespina, and the watches on board of both ships, was 7' 45". Captain Cook's must therefore be admitted as the true longitude, all the others differing only a few minutes from his. Thus it will be seen that there are few cities in Europe, the geographical longitude of which is determined with the same degree of accuracy as that of this barren rock, in one of the roughest and most inhospitable

table islands of the globe. But how infinitely important is this accuracy to the safety of shipping!

By our latitude at noon we were thirty-three miles from Cape St. John, which, at this distance, appeared a single high hill with some gentle acclivities on both sides. To the eastward, the land seemed to stretch still a few miles farther. We saw nothing of the New Year islands, and I must add, that although we brought to, the whole night, with a very moderate wind and scarcely any sail, I did not perceive the slightest difference between our observations and the dead reckoning: probably owing to the distance we kept from the land, in which I entirely followed Captain Cook's advice,—never to approach this island nearer than twelve leagues or thirty-six miles, to secure yourself against the strong currents, and not be obliged to put into New Year harbour.

The day was very beautiful with a fresh N. N. E. wind, which veered in the evening towards N. N. W. At noon we lost Cape St. John in a fog; and about seven in the evening it again cleared itself from the clouds. We now saw two hills near it, which are smaller but more peaked. After about a quarter of an hour, it disappeared altogether. At six in the evening we sailed across a strong current, stretching from N. E. to S. W. as far as the eye could reach, and in several places we could perceive large spots, where the water was quite still, probably owing to the meeting of different currents. The rippling which pointed out the north-eastern direction of the current, must have been predominant, as we concluded,

from observations made this afternoon and the next day. At half past eight Dr. Horner found our latitude, by the culmination of various stars, to be $54^{\circ} 46'$, fifteen miles more to the northward than the ship's reckoning, and the next day we found a difference of twenty-seven miles to the northward, and eighteen to the eastward.

After weathering Cape St. John, I steered throughout the night with a strong northerly wind to the southward, and one point to the west; and about eight o'clock I reckoned myself already some minutes to the south of Cape Horn. I therefore steered a more westerly course; but in about half an hour so high a wind arose at S. S. W. and towards evening veered round to W. that we were obliged to take in all our smaller sails, and to double reef our topsails. All this day we saw albatrosses, sea swallows, and different kinds of storm birds; and the night was very stormy, with violent gusts of wind, accompanied by rain and hail. In the morning the storm abated, and we were able to set more sail; but the sea ran very high, and being directly contrary to the wind, strained the ship to an extraordinary degree. The barometer, which the day before had fallen from 29 *in.* to 28 *in.* rose again 2½ lines; the weather, however, did not promise very well, and was besides so cold, that the thermometer on deck fell 3° . It seemed as though Staatenland were the boundary between two directly opposite regions. We had beautiful weather until our arrival there, and, with little exception, constantly fair winds, as our very quick run of only twenty-one days from St. Catherine's to Staatenland sufficiently shews. But scarce had we passed Staatenland, and approached the latitude of Cape Horn,

when south-west winds set in with cold weather, and a constantly clouded sky. Our imagination had been set in motion by our hitherto favorable passage; led us in a few days round Cape Horn; and transported us in a few weeks into the mild regions of the great ocean: but the west wind, which wore a fixed appearance, soon deprived us of this pleasant prospect, and made us fear that we were not to calculate on too much favour.

The fine weather we had at noon was, as I apprehended, of very short duration. About two o'clock we experienced a very heavy squall, which took us so completely unawares, that we succeeded with difficulty in getting in our sails: after this the wind, though it blew very hard, was not to be compared to a storm. About five the sky all round the horizon became overcast, while snow-clouds appeared some five or six degrees high, and from their columnar form, and the black clouds bordering on them, bore a beautiful but terrible aspect. We took in all our sail, with the exception of a few storm-sails, and waited in expectation of the effect of these clouds, which appeared to be fast approaching. It commenced with a hail storm, which for some minutes was very violent, and then changed to a more moderate but continued storm. During the whole night it blew very hard, with violent gusts of wind, and the waves ran mountains high. As we had been warned, as well by the barometer, which fell two lines immediately after the first squall, as by the general appearance of the weather, we were prepared against the worst. The wind varied between W. and S. W. abating a little in the morning, and at noon it was pretty quiet. The sun, too, made its appearance, and our latitude by observation

was $58^{\circ} 23'$, and our longitude $64^{\circ} 00'$. Towards evening we had again a violent squall, and about eight another hurricane from the S. W. much more violent than the former, and similar to the one we experienced on the 15th September in the Scagerrak, with this difference only, that the waves ran infinitely higher. In the morning, instead of subsiding, it increased in violence with tremendous squalls, accompanied by hail and snow. During this storm all the birds disappeared, except a few small ones, which, shortly before it came on, we had seen fluttering round the ship. This was the last gale we had; in the evening it abated; the next day it was pretty moderate, and on the 2d March we had a particularly beautiful day.—The enjoyment we derived from it, those only can form any idea of, who have been at sea in similar bad weather, of which in fact no seaman would complain, but for the cold from which we all suffered extremely. The quicksilver upon deck fell within 4° of freezing point, and in my cabin, during the space of a fortnight, it was seldom more than 8° above that point, and once only $5\frac{1}{2}^{\circ}$. Every one now came upon deck and endeavoured to warm himself in the rays of the cheerful and cloudless sun. Clothes, bedding, and sails were all hung out to dry, and this had become very necessary, although I never suffered a day to pass without having a fire lighted in the men's birth whenever the motion of the ship would allow it, and I had particularly appointed one man in every watch, to dry the wet clothes of those who were just relieved, before the fire. Several other tasks, of no less importance, were performed. During the storm we had discovered that the ship had a leak forward; and the carpenter was accordingly lowered down to the streak, when he found one of the planks of the outer

sheathing split; this we covered with a sheet of lead. The cables were likewise cast off from the anchors, which, from precaution, I had kept in constant readiness until we should have weathered Staatenland, and till now there had been no opportunity of unbending. This day was equally favorable for our observations: during the three last we made none, either for our latitude or longitude, and now discovered that, while the storm lasted, the ship had been driven twenty-five miles to the N. and forty-two to the eastward, so that after six days we were not by one minute to the westward of Cape St. John. This indeed diminished our satisfaction a little; but a gentle N. E. wind which sprung up, and increased by degrees, again raised our hopes. Hitherto we had not a single invalid; but the constant bad weather in these high latitudes, which are seldom clear of fogs, must in the end lay the seeds of the most dangerous diseases, in spite of the greatest care and most compassionate attention.

The variation of the compass was on this day $24^{\circ} 32'$ E. the southern inclination $73^{\circ} 15'$. The ship's latitude at the time was $58^{\circ} 59'$ S. her longitude $63^{\circ} 47'$ W.

In the mean while the N. E. wind increased, and in the evening we sailed due W. about nine or ten knots; and by our reckoning, at eight the next morning we had weathered Cape Horn, and were already in the great ocean.

CHAPTER VI.

FROM THE MERIDIAN OF CAPE HORN UNTIL OUR ARRIVAL
AT NUKAHIWA.

The Nadeshda and Neva sail round Tierra del Fuego—Uncommon low State of the Barometer during this Time—The Ships separate in a Storm—Continue the Voyage to the Washington Islands—Alter the Plan of our Voyage—We cross the Southern Tropic—Series of Lunar Observations for six Days—Remarkable Error of our Chronometers—We perceive one of the Mendoza Islands—Sail along the Coast of Uahuga—Arrival at the Island Nukahiwa—We anchor in Port Anna Maria.

AT eight o'clock in the morning of the 3d March, four weeks after our departure from St. Catherine's, we doubled Cape Horn; a voyage, which, perhaps, was never made in a shorter time. The wind, however, shifted almost in the same hour, from N. E. to W. and continued so, though not very high, during several days, with thick hazy weather, so that twice we lost sight of the Neva for some hours. The sea at the same time ran very high from the westward, striking the ship with considerable violence. On the 5th March Dr. Horner caught a glimpse of the sun for some moments, half an hour before noon. From its height he calculated our latitude to be $59^{\circ} 58'$; by the ship's reckoning it was $60^{\circ} 09'$, the highest latitude which the westerly winds drove us into. The longitude, calculated by the same observation, was $= 70^{\circ} 15'$. On the 7th March we had the good fortune to see the sun at noon, and our observations again proved to us that the current carried us daily thirteen or fourteen miles on an average due E. The 9th March the

sea was so calm that we lowered Hales's machine. At the depth of 100 fathoms the thermometer shewed $1\frac{1}{2}^{\circ}$, in 60 fathoms $2\frac{1}{4}^{\circ}$, and on the surface $2\frac{1}{4}^{\circ}$. The temperature of the air at the same time was 4° . On this day the variation of the needle, by a mean of several azimuths, was $27^{\circ} 40'$ E. the greatest we met with in these high southern latitudes. The ship's latitude then was $50^{\circ} 20'$, and her longitude by the watches $72^{\circ} 45'$.

On the 11th March I reckoned myself already half a degree to the westward of Cape Victoria ; I steered notwithstanding in the same direction, not trusting to the continuance of the southerly wind, the first we had had since passing Cape St. John ; and I wished to secure myself entirely against the westerly and prevailing winds in this sea until you reach the tropic, that in case of necessity, I might be able, without risk, to steer a northerly course, which I could only do by making my longitude more W. For this reason I would not steer to the northward till after we had reached the 80° of longitude, a precaution which I owed to the example of Captain Bligh, who, notwithstanding he had reached the 77° , was unable to weather Tierra del Fuego, and was obliged to steer for the Cape of Good Hope.

On the 14th March we were in latitude, $15^{\circ} 13'$ S. and longitude, $82^{\circ} 56'$ W. By our reckoning, the longitude was $86^{\circ} 27'$. We were now eight degrees to the westward of Cape Pillar, the westernmost promontory of Tierra del Fuego, and I had now no doubt of clearing it, however unfavorable the weather might prove. As soon therefore as the wind permitted, I steered

a north-west course, in such a direction, however, as to keep between the two lines of Captain Cook's first and second voyages, expecting to find here, for the most part, southerly winds, instead of which it was almost constantly north, and blew on the 10th very hard. The waves ran so high, and crossed each other in such different directions, that the ship was tossed about more than in any storm we had hitherto experienced. The very low stand of the barometer for several days past, and which on the night of the 17th, was 28 in. 45, the lowest we had seen it (except on the 1st October of the current year) during the whole voyage; the high waves from the N. W. and the clouds which, on the 18th, rose very fast from that direction, led us to expect a violent storm from the N. W. against which we made every preparation. But the weather on this day was very fine, and almost calm. The night preceding we had observed a heavy dew, a sure sign as is generally conceived of the vicinity of land. It was not probable, however, that any could have been near the spot where we then were, our latitude being $55^{\circ} 46'$, and longitude $80^{\circ} 00'$.—The variation of the compass, by a mean of several observations, made, whenever the weather permitted, with two compasses, was $19^{\circ} 59' 20''$; the dip of the S. end $75^{\circ} 30'$.

At eight o'clock in the morning of the 21st March, we were, by my reckoning, nearly opposite the straits of Magellan; for Cape Victoria, the westernmost head-land on the northern shore of the strait, bore at this time E. distant about 650 miles. We had thus weathered Staatenland and Tierra del Fuego in twenty-four days, a much quicker passage than I had promised myself at this late season of the year. The barometer now re-

sumed its usual height. During the time we were sailing round Cape Horn, in the best, as well as in the worst weather, it had always been six lines lower than before we reached this neighbourhood, and it now again began to rise.

I continued steering a north-west course not to approach the latitudes that have been so much crossed by Byron, Wallis, Carteret, Bougainville, Cook, and several late navigators; almost all of whom, with the exception of Cook in his first voyage, after having passed the straits of Magellan, had steered nearly a due northerly course. During three days we had a very fresh S. wind, with this remarkable circumstance attending it, that, although it blew hard, there was not the least swell of the water; the sea being as calm as in a bay. The barometer stood at 30 in. 3, a greater height than we had hitherto seen it. Yet the sky was constantly clouded; and, on the 24th March, so high a wind arose at N. N. E. veering to N. N. W. with lofty waves and foggy weather, that we lost sight of the Neva. The stormy thick weather continued, and our signal guns were not answered. Our separation therefore appeared certain, and when the weather cleared up, we were quite convinced of it; nor was it probable that we should again meet until our arrival at the island of Nukahiwa. Our latitude on the day of our separation was $47^{\circ} 09'$, and our longitude by the timepieces $97^{\circ} 04' W.$

On the 8th April I mustered the whole crew, and caused them to be examined, lest there should be any symptoms of scurvy among them. It was now ten weeks since we set sail, and during the last six we had met with very bad and damp

weather: Dr. Espenberg did not, however, find the smallest symptom of disease amongst them; but on the contrary, assured me that their gums were firmer and appeared more healthy than on their examination in Cronstadt. Several of them seemed to consider it as an affront that their gums and feet should be examined, and said, half vexed at it, that they should never have the scurvy. The examination of course ended quite to my satisfaction, and I had the good fortune not to have a single man on the sick list, though I had no hopes of the ambassador's cook, who was in a decline, being able to live through the voyage. At Brazil, I had endeavoured to convince him of the necessity of his remaining behind, and offered him the means of returning home; but he would not consent, and I thought it cruel to compel a man to quit the ship against his wishes.

As the weather was growing warmer, I no longer gave the crew butter, but ordered them to double their portion of sugar and vinegar, and gave them every day tea for their breakfast.

On the 10th April we had a very beautiful and warm day, the first of the kind we had experienced since our departure from St. Catherine's. As I calculated now, with some degree of probability, that the bad weather had entirely left us, from this day forward. I had a great deal of work put in hand, which could only be done in fine weather, and which occupied us nearly till our arrival at Nukahiwa. The sailmakers repaired the sails we wanted during the trade-winds, in order to preserve the best against the bad weather in the higher latitudes. The smith erected his forge, not only to make several articles that were required for the ship, but also knives and hatchets to

barter with the islanders of this ocean ; the carpenters repaired the boats ; the guns were again brought out of the hold, and resumed their former station, and Count Tolstoy undertook to practise part of the crew in exercising and firing.

On the 12th April we had a violent storm for some hours ; and about three the next morning a sudden change in the temperature of the air announced a southerly wind, which followed in a few hours. The wind blew fresh from the S. W. and by S. and lastly S. E. which enabled us to set all our sail. I steered N. N. W. finding myself obliged to depart from the plan I had laid of pursuing a westerly course ; the constant N. W. winds having driven us back to the 99° of longitude ; and as I could not reckon upon a constant fair wind, until we should reach the S. E. trade-wind, and was unwilling to lose any time, particularly as I had determined to proceed directly to Kamtschatka to unship the goods with which the Emperor had permitted the American Company to lade her, previously to going with the embassy to Japan. This determination of sailing direct to Kamtschatka, deprived me, indeed, of the hopes of making any discoveries, with which I had long diverted my imagination, and for which I had besides already laid my plan. The business of the embassy, the concerns of which would require a period of at least six months, could not possibly be concluded this year, so that until May we should not have been able to return to Kamtschatka. As we must therefore be obliged to spend the whole winter in Japan, it was needless to follow my instructions, to proceed there with all possible haste, and I might have spent the months of June, July, and August, in exploring the hitherto but little known regions of this ocean.

Nevertheless I conceived it my duty not to do so. It was of great consequence to the agents of the American Company in Kamtschatka to receive the effects on board our ship, particularly the iron and cordage, as early as possible; and it was easily to be foreseen, that a great part of the cargo must be spoiled during a stay of nine or ten months in Japan, as in the course of the voyage we had frequently found that the casks containing brandy, of which we had several on board, were of a very bad quality. One of the important objects of this voyage was, to procure the American Company the means of bringing their commercial relations into credit as soon as possible, and would therefore have failed; and it was a matter of doubt whether the embassy would meet the success that was expected from it. Thus would a very expensive voyage have been undertaken, and two of its chief ends not been obtained. I now thought it necessary to convey as soon as possible to a place of safety, the rich cargo destined by the Company for Kamtschatka and America, which the directors, from confidence in me and my officers, had not ensured; and the ambassador, as agent for the American Company, was too well convinced of the advantages of my proposal, to make any opposition to it.

Besides this I was to touch at Easter island, distant nearly 500 miles to the westward of us, in the expectation that Captain Lisianskoy, who knew nothing of my resolution to steer at once for Kamtschatka, would bend his course thither in the hopes of falling in with me. The wind during two days blew from the S. E. and E. S. E. so that we already fancied we had caught the trade wind; but it again shifted to the N. E. and N. N. E. I altered my course one or two points, as I found

that we approached too near the tract in which Wallis and Bougainville had steered ; and had invariably a man during the day at the mast head, and all night on the bowsprit, promising the first ~~whip~~ during the day should discover the land, a reward of ten, and in the night time of twenty piastres. On the 17th April we crossed the southern tropic in $104^{\circ} 30'$ longitude.

The beautiful clear weather on the 18th and 19th allowed us to make several lunar observations. Those of the 18th reduced to noon, gave $106^{\circ} 51' 23''$. Those of the 19th $108^{\circ} 04' 12''$. Arnold's watch, No. 128, shewed on the first day $107^{\circ} 20' 52''$, on the latter $108^{\circ} 29' 15''$. By the mean therefore, No. 128 was $27' 46''$ too much to the westward. The variation of the compass was, on the 18th April, in latitude $22^{\circ} 20' = 5^{\circ} 49'$, and on the 21st, in latitude $20^{\circ} 58'$, and $108^{\circ} 46'$ longitude, $5^{\circ} 12' E$; and as between this and the Sandwich islands it scarcely ever changes, and is always between 3° and $5^{\circ} E$. I shall notice it but seldom.

On the 22d April, in 20° of latitude, after some violent gusts of wind which followed each other rapidly from the N. E. and S. E. and split some of our old sails, we fell in with the true S. S. E. trade wind, which continued sometimes blowing fresh, and at others more moderately, but always accompanied with fine weather, until we arrived at the Washington islands. The thermometer rose in my cabin, the coolest place in the whole ship, to $22\frac{1}{2}^{\circ}$, and on deck in the shade to $23\frac{1}{2}^{\circ}$. This continual fine weather allowed us to make a series of lunar observations for six days. These are so far important, since the longitude of the Washington and Mendoza islands is founded upon them,

and that this differs from that given by Captain Cook for the latter, and by Marchand and Wilson for the former. Their perfect uniformity must obtain them some credit, particularly as for the most part they were calculated by Bürg's lunar tables. By a mean of these observations, the error of No. 128 was discovered to be $1^{\circ} 00' 30''$ too much west, and this error is corrected in all our chronometrical observations of the longitude of the Mendoza and Washington islands on the 6th and 7th May.

I now held such a course as carried me right in the middle between Fetugu island (Cook's Hood island) and Uahuga, (Hergest's Riou island,) in which situation they are both said to be visible. In the night of the 4th May we had a violent thunder storm, with heavy rain and some gusts of wind. Towards morning the weather cleared up a little, but the sky was very cloudy and prevented our taking any lunar observations. On the 5th at noon our latitude was $9^{\circ} 20' S.$; the longitude by the watches, corrected after the last lunar observations, = $137^{\circ} 08' W.$ We therefore passed the night, as the wind blew pretty fresh, under very moderate sail. At day-break we saw Fetugu island, bearing S. W. 50° , distant from 35 to 38 miles. This island is lofty, but is not of a great circumference; it consists of a single high, and at the summit almost flat, rock, with a gentle inclination from north to south. On the northernmost point is to be perceived, though not very distinctly, a division forming two hills. In Captain Cook's chart there appears on the southern side a number of small rocky islands, which we could not perceive; but instead of these we saw several on the N. W. and W. sides, of which some are pretty lofty and quite

circular, and others of a pyramidal form lying about 250 or 300 fathoms from the island. As Captain Cook did not go more to the northward than $9^{\circ} 20'$ when this island bore W. S. W. of him, he could not have perceived the rocks which surround the N. W. and W. sides. At half past six we saw Ohiwaoa, which Mendaña has called Dominick. At first we took it for Montane, (Mendaña's San Pedro.) The easternmost point bore by compass S. W. the middle of it S. W. $70^{\circ} 30'$. The appearance of this island seemed to agree perfectly with the description which Cook has given of it; but at the distance of 35 miles, we could not examine it particularly. At nine o'clock, the eastern point bore due south. Dr. Horner and Lieutenant Löwenstern at the same time took altitudes of the sun, to ascertain the time; by which, with the already mentioned errors of the timepieces, its longitude appeared to be $138^{\circ} 21' 30''$. The western point of the island we could not distinctly see. At eight o'clock I steered W. N. W. to catch Uahuga at noon in the west, as a sure means of getting its latitude correctly. At ten we perceived the island bearing W. by N. and some minutes after the middle of the island Fetugu bore due south. Its longitude, according to our observations, is $138^{\circ} 29' 30''$ which differs from that of Cook ($138^{\circ} 48'$) by $18' 30''$, and we found its latitude by the combination of our angles and triangles to be three minutes more to the northward. At the time of the sun's culmination, a double pik on Uahuga lay due west distant 18 miles. The meridian was observed, very particularly, by Dr. Horner, Lieutenant Löwenstern, and myself, with sextants made by Troughton and Ramsden, and the latitude found to be $= 8^{\circ} 55' 58''$, which was also the latitude of this double pik, which seemed to me to lie nearly in the

middle, rather nearer perhaps to the south than to the northern extremity. Fetugu, which we shortly after lost sight of, bore at noon S. E. 18° . I now steered along the coast of Uahuga at a distance of 6 or 7 miles, and though we occasionally hove the lead we could find no bottom with a line of 100 fathoms. This island has a very striking appearance; from east to west the land rises to a considerable height, and forms in the middle a pretty lofty mountain, quite steep towards the west; at a short distance, only more to the westward, is the double pik already mentioned, and as the eastern end was brought to bear N. W. by N. the double pik disappeared, and the high mountain in the middle assumed the appearance of a cupola, on the west side of which a column in a pyramidal form was very conspicuous. On the south side there are two bights in which probably an anchorage might be found; but they afford too little shelter from the wind for a ship to lie there in safety. The western side of this island seemed to me the most fruitful, for although it is pretty high, it is more even than the east side, on which there are rough rocks forming a line of piks divided by deep vallies. These piks, although the island is not so wild, give it a resemblance to Staatenland. At the west end there is a rocky island about a mile and a half in circumference, and between the two is a large flat low mass of stone having the appearance of a tombstone. The western extreme of the island falls gradually away to a steep and very prominent but flattened rock; behind which there is said to be a secure harbour, but which we could not examine. We were but a very short distance from the land, and the wind was moderate, but not a single canoe came off to us: nor could we distinguish any inhabitants, although we saw smoke in several places. As the

east point of the island bore nearly due north, Dr. Horner took some altitudes of the sun to determine the time, by which the longitude, according to the corrected rate of the watches was $= 139^{\circ} 05'$. The island lies E. N. E. and W. S. W. and its greatest length is nine miles, and so far this agrees with the description given of it by Lieutenant Hergest and the astronomer Gooch; but the appearance of the south side is very different from what Hergest describes, who was only in the vicinity of the west side. The middle of Uahuga lies, by our observations, in latitude, $8^{\circ} 54' 30''$ S. and longitude $139^{\circ} 09' 30''$ W. According to Hergest it is in latitude $8^{\circ} 50' 30''$, and longitude $139^{\circ} 09'$.

About five in the afternoon we perceived Nukahiwa wrapt in fog, which prevented our forming any correct judgment of its distance. About six I took in all, except the top-sails, and as the distance between Uahuga and Nukahiwa by Arrowsmith's chart, which I thought more to be depended on than Hergest's, in the second volume of Vancouver's voyage, is 27 miles, I wore, after running half this distance, to the northward, yet we found ourselves in about an hour so near to the land, as obliged us immediately to put about. This proved that the distance is laid down too great, which our survey confirmed. From the west side of Uahuga to Cape Martin, the S. E. point of Nukahiwa, is only 18 miles. Hergest makes it 20, and Wilson 24 miles. I cannot therefore conceive what has induced Arrowsmith to reject Hergest's account, not only of the latitude and longitude, of the Washington islands, but also of their relative situations, as he ought to have placed confidence in the labours of a pupil of Cook and an astronomer. Hergest, indeed, is not

correct throughout ; his statements are nevertheless much more so than either Marchand's or Wilson's. In his draught of the island of Uahuga, Arrowsmith ought to have followed Hergest, as Marchand never had sight of it, and Wilson probably only saw it at a distance. Of the works of the American, Ingraham, who first discovered this island, or of his countrymen, none have ever fallen in my way.

At day-break we steered for the S. E. point of Nukahiwa, bearing N. W. distant about 15 miles. Upoa at the same time bore S. W. distant 24 miles, and the number of piks upon this island gave it at a distance the appearance of an ancient city with lofty towers. At ten o'clock we were opposite Home bay which Hergest has called Comptroller's bay: here, I lay to and lowered a couple of boats, in which I sent Lieutenant Golowatscheff and the boatswain of the ship. Cape Martin and the west point of Comptroller's bay are both remarkable, particularly the former, by their prominent and broken appearance; and another not less striking mark of Comptroller's bay is, a great black rock, half a mile to the west of Cape Martin: but though this bay is sheltered from the wind, its appearance is not on the whole very promising. We perceived some Indians running along the shore, but not a single canoe put off although the wind was very moderate, which gave us but a mean opinion of their skill in navigation; an opinion that was confirmed during our stay upon the island. At a distance of two miles from the land we were unable to strike ground, we next found a bottom of fine sand in 50 fathoms water, and this depth decreased to 15 fathoms, when again, close along the coast, it was 35 fathoms. As soon as I

had got the boats ready, I steered parallel with the shore, at a distance, at the farthest, of a mile, without being able to discover the harbour which Hergest calls Port Anna Maria. The whole coast appears like an uninterrupted line of perpendicular rocks, connected with a chain of mountains, stretching quite inland. These craggy barren rocks have a gloomy appearance, which is only enlivened by beautiful cascades, falling near each other, from the rocks into the sea, from a height of at least 1000 feet. On the top of one of these mountains we distinguished a square stone building resembling a tower. It was not very high, had no roof, and was surrounded with trees, and I took it to be a morai or burial place; but as I never saw any building of this class, similar to the one we visited in the vale of Tayo Hoae, I think it not improbable that it was a kind of fortification, although I could not upon a nearer inquiry obtain any farther information upon it. There were several Indians upon the shore on the low rocks, drawn there, perhaps, from curiosity; and many of them were busied in fishing.

At eleven o'clock we perceived to the westward a canoe rowing off to us: it had an outrigger, and was paddled along by eight Indians; and I was much struck by a white flag it had hoisted, a token of peace that led me to expect some European on board of it. My expectations were soon confirmed. There was an Englishman in the boat, who at first had quite the appearance of one of the islanders; his dress being entirely in their fashion, consisting merely of a girdle round the waist. He shewed me the certificates of two Americans, (to whom he had been of assistance during their stay here, particularly by

procuring them wood and water,) in which it was attested that he had conducted himself well; and he offered me his service, which I readily accepted, being glad to procure so good an interpreter, by whose assistance I hoped to obtain some particular information upon this almost unknown island. In the short stay I proposed making here, it would have been well nigh impossible for us to acquire any positive knowledge of the manners and customs of the inhabitants. Without an acquaintance with their language, all our observations would have been reduced to conjecture, generally proving incorrect. This Englishman, whose name was Roberts, told us that he had been seven years upon the island, and two years previously in that of Santa Christina; that he had been put on shore on the latter, out of an English merchant ship, the crew of which had mutinied against their captain, and could not prevail upon him to join their party; and in Nukahiwa he had lately married a relation of the king's, by which he acquired great consideration; so that it would be very easy for him to be of assistance to us. At the same time he warned us against a Frenchman who had deserted from an English merchant ship, and had likewise resided here for some years. This Frenchman he described as his bitterest enemy, who omitted nothing to blacken him in the eyes of the king and the islanders, and had often, he added, made attempts against his life. Here, too, the innate hatred between the French and English appeared. Not content to disturb the peace of the whole civilized world, even the inhabitants of the lately discovered islands of this ocean must feel the influence of their odious rivalry without so much as knowing the origin of it. How unfortunate it is, that at such a distance, upon islands, the inhabitants of

which are as yet rough in their manners, and whose mode of life is still horribly cruel, where alone the necessity of self-preservation ought to have united two civilized men, though half the globe had been interposed between their native countries; that here, I say, two Europeans should hate, and strive after each other's life! During my stay at Nukahiva I made every possible exertion to reconcile them, and pointed out the motives which ought to induce them both to live in unity and peace. As they had been placed by fate among a people, whom they themselves represented as false, cruel, and faithless; by friendship and harmony alone could they avail themselves of their superior knowledge to hold all the inhabitants at defiance; while, on the contrary, in the manner they were now living, they could only expect from day to day to fall a sacrifice to each other's hatred. They indeed promised me to be reconciled, and even shook hands in my presence as a proof of their reconciliation; but the Englishman told me in the presence of the Frenchman, that he could not calculate upon a real reconciliation, having frequently offered to live in peace and friendship with his opponent, who would never agree to it; and he added, with much emphasis, that it was easier to float the rocks, to which he pointed, than to inspire this Frenchman with friendly sentiments.

At noon we anchored in Port Anna Maria in 16 fathoms water, over a bottom of fine sand and clay, about half a mile from the northern, and a quarter of a mile from the eastern, shore. The small island of Mutanoe, which forms the western side of the entrance, bearing S. W. 30°, and Mattau, on the east side, nearly south. The small stream from which we received our water, bore N. W. 11°.

CHAPTER VII.

STAY AT NUKAHIWA.

Barter with the Inhabitants—Total want of animal Provisions—Visit to the King—Arrival of the Neva—Misunderstanding with the Inhabitants—They take to their Arms—Second Visit to the King—Amicable Arrangement—Visit a Moray—Discovery of a new Harbour, which is called Port Tschitschagoff—Description of the Vale of Schegua—The Nadeshda and Neva sail from Port Anna Maria for the Sandwich Islands.

WE had scarcely let go our anchor, when the ship was surrounded by several hundred of the inhabitants, who brought cocoa-nuts, bread-fruit, and bananas for sale. The only things we could give them in exchange were pieces of old iron hoops, four or five inches long, with which I had supplied both ships for this purpose while we lay at Cronstadt. Such a piece was usually the price of five cocoa-nuts and three or four of the bread-fruit; but though they seemed to set a very high value on these, axes and hatchets were the chief objects of their wishes. They shewed a childish joy on receiving even a small piece of iron hoop, and usually evinced their satisfaction by a loud laugh, displaying their newly acquired riches with an air of triumph to their less fortunate companions, who swam round the ship. This expression of pleasure was perhaps a proof of the little opportunity which they have hitherto had of procuring this valuable metal; and, indeed, we collected, from the

account of Roberts, that only two small American merchant ships had touched here in the space of seven years.

As I understood that very few hogs were to be had, I gave out that these alone should be considered as payment for axes and hatchets. In order to facilitate the purchase of provisions, I forbade the crew, immediately upon my arrival, to barter for any thing, but more particularly for curiosities, with the natives; intending, a few days before our departure, and as soon as we should have procured a sufficient supply of provisions, to recall the prohibition. I appointed Lieutenant Romberg and Dr. Espenberg to manage the barter, and they alone were permitted to purchase provisions, conceiving this to be the only means of preserving order; but as I now found that no hogs were to be procured, and that there never could be any scarcity of cocoanuts, I removed the prohibition after a few days, and every one was allowed to supply himself, according to his fancy, with the curiosities of the island.

At four in the afternoon the king and his suite came on board. His name was Tapege Kettenowee. He was a very strong, well made man, with a thick and extremely fat neck, from forty to forty-five years of age. His body was tatooed with a dark colour approaching to black, so completely, that it even extended to spots on his head from which the hair had been cut away. He was in no wise to be distinguished from the lowest of his subjects; being, with the exception of the tschiabu,* entirely naked. I led him to my cabin, and gave

* Tschibu is the girdle which the savages wear round their waist; in the Sandwich isles it is called maro.

him a knife and a piece of red cloth about twenty ells long, which he immediately bound round his loins. To his suite, consisting chiefly of his relations, I also made some presents, although Roberts advised me not to be so generous, telling me that not one of them, not even the king, would ever make me any return for them. I did not fail to draw the king's attention to the size of our ship and the number of our guns, assuring him, at the same time, that I had no wish to employ them against his subjects; but that he must recommend to them, in the strongest terms, not to drive us to violent measures. At this time I imagined that the king's authority here was equal to that of the sovereigns of the Sandwich and Society islands; but I was soon convinced of the contrary. When he returned upon deck he was struck with the appearance of some small Brazil parrots, at which he expressed his pleasure and astonishment in no very moderate terms, sitting himself down, and considering them for some minutes. I conceived that I should ensure his friendship by making him a present of one; and Roberts, who blamed my liberality, appeared to have conveyed my offer to him in improper terms, for the next day a hog was brought to me in exchange for it.

At sunset all the men without exception went on shore; but about 100 of the females still remained near the ship, round which they had been swimming during five hours. In this time they had made use of every art in their power to declare the object of their visit, nor could they doubt that their wishes were understood, since neither their pantomime nor their attitudes could be mistaken. I would not allow the work on board the ship to be neglected, and this was the reason why no par-

ticular attention was paid to them; and I had issued express orders, that no person of either sex, with the exception of the royal family, should be received on board without my permission. It scarcely began to grow dark when these poor creatures begged in so pitiful a manner to be taken on board, that at last I gave my consent. I had the less need for caution on this head, as I had not a single venereal patient on board, and Roberts assured me that this disease was hitherto unknown in the island. I nevertheless set bounds to this favour, and, after the second day, no females were admitted into the ship, during all the time that we remained here, although every evening there were seldom less than fifty swimming about the ship, who would not go away until a few shots were fired over their heads. I think myself not incorrect in stating, that this debasement of the female sex is less occasioned by levity or ungovernable passion in them, than by their duty to the unnatural and tyrannical orders of their husbands and fathers, who sent off their wives and daughters to procure small pieces of iron and other trifles, and in the morning were seen swimming out to meet them and take possession of the treasures which they had obtained. I have myself seen a man with a girl ten or twelve years of age, probably his daughter, swimming round the ship and making an offer of her. But what excited in me no less astonishment in a physical sense, than horror in a moral point of view, was a child not more than eight years of age, who shewed as little moderation in granting her favours as her sisters of eighteen or twenty. I considered this unfortunate object for some time with a mixture of pity and disgust. In every respect a perfect child, laughing and playing with the feelings so natural to that state, she appeared not to have the least sense of her melancholy situation.

At six the next morning the ship was again surrounded by several hundred islanders with their cocoa-nuts, bananas, and bread-fruit; and the whole royal family did not fail to come on board by seven. I led them all into my cabin to make them a present. A portrait in oil of my wife struck them particularly, and they stood for a long time before it with every symptom of pleasure and surprise, pointing out to each other the curled hair, which they consider as a great beauty. A looking-glass was no less an object of their astonishment. It was not improbable that some of them had already seen such a thing, yet they all looked behind the glass to discover the cause of this wonderful appearance. A large mirror, in which they were able to view their whole persons, must have been something new to them; and the king was so particularly delighted with it, that, either from vanity or curiosity, upon every visit, he immediately went into my cabin to this glass, standing before it for whole hours to my great annoyance.

As I had determined to go on shore, as well to return the king's visit, as to examine the water we were to take in here; and did not chuse to have the ship filled with visitors during my absence, I fired off some cannon, and hoisted a red flag, when the ship was declared tahbu,* and all trade immediately ceased. This had certainly the effect of preventing any person from going on board; but those who swam round the ship seemed to go away but very slowly and with great reluctance. At ten o'clock I went on shore, accompanied by the

* I conceive it unnecessary to explain the word tahbu, which is sufficiently known by Captain Cook's voyages. In the next chapter the force of the tahbu upon this island will be mentioned.

ambassador and most of the officers of the ship. Although, from the friendly footing on which I stood with the king and his relations, and the perfectly unsuspecting disposition of the islanders, I had every reason to calculate upon an amicable reception, I thought it prudent, and indeed necessary, on our first visit, not to appear otherwise than well armed. I therefore took a boat with me besides my barge, of which all the men as well as the officers were armed, the former with a brace of pistols and a sabre, and six of them with fire-arms. The Englishman and Frenchman conducted us as interpreters. A vast concourse of people of both sexes were collected on the beach where we were to land, which, owing to the heavy surf, was not effected without difficulty. Although neither the king nor any of his relations were among these people, they conducted themselves with great decency and respect. After I had examined the water and found it good, we directed our course towards a house not far from the beach, where the king was waiting to receive us. About five hundred paces from this house, the king's uncle, who is at the same time his step-father, and is here always called the king's father, came to meet us. He was an old man of seventy-five years of age, yet seemed to enjoy perfect health. His eye was very brilliant, and the features of his countenance displayed the marks of an intrepid and determined character. He was one of the greatest warriors of his time, and was now suffering from a wound on his eye, over which he wore a bandage. In his hand he held a long staff, with which he endeavoured, but in vain, to keep back the crowd that followed close upon us. He took me by the hand, and led me to a long narrow building, in which the king's mother, and all his relations of her sex, were seated in a

row, and appeared to be expecting us; and we had scarcely entered the precincts of this building, when the king likewise came to meet us, and welcomed us with much familiarity and friendship. The people here stood still, and separated in two bodies, the king's dwelling being tahbu. I was forced to sit down in the middle of the royal ladies, who all examined me with a great deal of curiosity, holding my hand by turns clasped within theirs, and only dropping it to examine my clothes, the embroidery of my uniform, my hat, &c. There appeared so much frankness in all their countenances, that I was in the highest degree prepossessed in their favour, and presented them with some buttons, knives, scissars, and other trifles, which I had brought with me; but they did not appear to derive that pleasure from them which I had expected, and they seemed much more occupied with us than with our presents. The king's daughter, a young woman of about twenty-four years of age, and his daughter-in-law, who seemed a few years younger, were both of a remarkably good appearance, which even in Europe would not have been denied. They were wrapped in a yellow stuff, and their heads unadorned, except by their black hair, which was well smeared with cocoa-nut oil, and was tied in a bunch at the top. Their bodies, which were not entirely covered by the yellow stuff, were neither coloured nor tattooed; but half of the arm and hand was tattooed black and yellow, which gave them the appearance of short gloves, such as our ladies used formerly to wear.

After resting here, the king led us, accompanied by all his relations, to another building about fifteen paces from the first,

and which is appropriated to their meals.* Mats were immediately spread, upon which we seated ourselves, and our hosts seemed all so rejoiced at having us with them, that they knew not in what way to evince their satisfaction. One fetched us cocoa-nuts, a second bananas, a third water, while several of them sat down and fanned us. After staying about half an hour, we took leave and returned to our boats. The king did not accompany us; but his step-father did to the spot where he had first met us. An incalculable number of people surrounded us again, and many of them were very noisy, not however, as I believe, with any bad intentions, though perhaps the six men with their fire-arms, three of whom preceded and three followed us, were the chief cause of their quiet behaviour. At noon we again arrived on board, and I immediately sent off the long boat with empty water-casks, which returned in about three hours. The natives lent every possible assistance to our people; they filled the casks, and swam with them back through the surf; nor would it, without their help, have been possible for us to have procured more than one boat load of water in a day; and even then not without great exertions on the part of our men, and the risk of endangering their health. With the assistance of the natives we could with great facility send off the boat three times in the day, while our people had only to attend to and watch them, and during eight days, they only succeeded in getting one iron hoop from a cask, and this convenient mode of obtaining water cost us each time no more than a dozen pieces of broken iron hoop, about five inches long.

* In the next chapter this house will be particularly described when I speak of their places of abode.

Notwithstanding all our exertions we could not succeed in procuring hogs. In three days we had got but two, of which one was a present made in return for a parrot, and the other we received in exchange for a hatchet. We were therefore obliged to live, as at sea, upon the ship's provisions, and cocoa-nuts being the only things that appeared to sweeten the blood after so long a use of salt-meat, I purchased all that were brought for sale, and delivered out as many of them as our people chose to eat.

In the afternoon of the 10th May we received word from the shore that a three-masted ship was visible from the hills, and as I imagined that this ship must be the *Neva*, I immediately sent a boat with an officer to bring her into the bay. But we were too late, and the *Neva* remained at such a distance from the land that the boat returned without being able to fulfil its commission. The next morning I sent Lieutenant Golowatscheff to meet the *Neva*, and about noon we had the pleasure to see her enter the bay; but as it was calm, although I sent my barge to assist her, it was not until five in the afternoon that she came to an anchor near us. Captain Lisianskoy informed me that he had waited some days at Easter island in the hopes of finding us there; that strong westerly winds had prevented him from anchoring, but that he had sent a boat to Cook's bay to procure some bananas and potatoes from the natives. I had the satisfaction to learn that all was well on board the *Neva*, and that she had met with no accident since our separation.

On the 12th in the afternoon, just as I was going on board to Captain Lisianskoy, I received the unpleasant intelligence

of the natives of Nukahiwa being in a state of confusion, and that they had taken up arms, a report having been spread among them that their king was arrested on board my ship. The Neva's boat came along-side at the same moment, and the officer reported that it was with great difficulty he had succeeded in getting away, nothing but the persuasions of Roberts having prevented the natives from seizing him. Roberts in the mean time was in great danger of falling a sacrifice to their rage. This intelligence was to me the more inconceivable, as I had but just quitted the ship, and the king had gone on shore about half an hour before in one of our boats. He had passed the whole morning with us, and I had never seen him in better humour; for besides that he always received some present when he visited us, he had been shaved and washed with perfumed water, which seemed to make him infinitely happy. I instantly returned on board to inquire whether any one had insulted him; but nothing of the kind appeared, and I remained doubtful whether the king himself had not spread the report, though this seemed almost impossible, as he could have no cause of complaint. I now began to suspect that the Frenchman, from some malicious reason, perhaps envy at the Englishman's being preferred to him, had endeavoured to create a dispute between us, expecting to derive some advantage from it; and my suspicion seemed to be confirmed by the inquiries I made into the subject. The case was this: while I was at dinner, the officer of the watch informed me that the king, who scarce an hour before had gone on shore, had returned, accompanied by another person, with a hog, for which he demanded a small parrot. In about ten minutes I went upon deck, and found that the owner of the hog was already

gone, the parrot not having been immediately delivered to him. This surprised me, and being very anxious to have the hog, I requested the king would call back the impatient vender; he appeared not to mind the king's orders, and paddled the faster on shore. Immediately after, one of the king's attendants leaped over board, and swam after the boat, to persuade the man, as the Frenchman assured me, to bring the hog back; but this was not the case, for, as I afterwards learned, he was gone on shore with the news of my having put the king in irons. If this was not, as I believe, another invention of the Frenchman's, it was his duty to have informed me of the king's orders, which I might easily have foreseen would lead to unpleasant consequences. I had considered the whole affair as a trifle, which it really was; had not taken it up at all seriously; and still less did I appear to be angry, in which case he might have feared some strong measures on my part. The king remained on board another hour after this, and then went on shore in one of the ship's boats apparently well pleased. In the mean time the news had scarcely spread on shore of his being in irons, when every body snatched up their arms, and it was with difficulty that the Neva's boat had been able to get back. The king's arrival, who assured his subjects that no injury had been done to him, appeased them a little; but he either suspected himself that I was going to use violent measures against him, or the Frenchman had inspired him with this fear, so that I determined the next day to go and assure him that no violence was intended. A few days before this the king's brother had asked me, why I did not put some one in irons, as an American had done by one of the king's relations,* but I

* This American had been here about eight months before.

answered that so long as they conducted themselves in a friendly manner towards me, I certainly should do no one any injury, and I trusted we should part good friends.

Captain Lisianskoy accompanied me, and we set off at eight o'clock, having sent our long-boat at seven for water. We landed, accompanied by twenty men under arms, and our own party consisted of more than twenty persons all armed, while the crews of the two long-boats, both of which were fitted with a couple of one pounder swivel guns, consisted of eighteen men under the command of two officers. We might therefore have bid the whole island defiance, in case of any hostile attempt against us, but nobody appeared on the beach at our landing. Throughout the night we had seen fires in different places, and in the morning no one came on board with cocoa-nuts as usual, from all which we concluded that the public mind was not very quiet. We proceeded directly to the king's house, which was situated in a valley about a mile off. The way thither led through a copse of cocoa trees, bread-fruit, and birch trees; the grass grew so luxuriantly that it reached to our knees, and incommoded us very much as we walked; at length we came to a foot-path, where were several marks of an Otaheite custom, not very favourable to the cleanliness of the Nukahiwa people. From thence a hollow way, filled with rain-water up to our ankles, led us to a path, which was kept with the greatest cleanliness. We here entered a romantic, beautiful country, and found ourselves in a large forest, that seemed to reach to the chain of mountains behind. The greatest part of the trees in this forest were apparently about seventy or eighty feet high, and chiefly cocoa and bread-fruit

trees, as was easily to be distinguished by the fruit with which they were all loaded. Several winding rivulets, that rushed with considerable noise and rapidity from the mountains, and whose beds of large broken rocks formed the most beautiful cascades, crossed each other and watered the habitations of the valley. In the vicinity of these habitations, a number of plantations of taro-root and cloth-mulberry, laid out in great order, and surrounded with a neat enclosure of white staves,* bore the appearance of belonging to a people who had already carried cultivation to a considerable extent; and these delightful prospects assisted a great deal in removing the unpleasant sensations we experienced upon reflecting, that we were amidst the dwellings of cannibals, capable of the greatest crimes, and who commit the most unnatural acts without hesitation, or, indeed, without perceiving within them those calls of nature to which even wild beasts are awake.

The king met us about one hundred paces from his dwelling, whither, after a hearty welcome, he accompanied us. The whole family was assembled there, and seemed very much rejoiced at our visit; indeed they had reason to be so, for they received presents from every one of our party, and the queen expressed particular satisfaction at a small looking-glass which was given to her. I asked the king what had induced him to spread a false report, which had well nigh destroyed the harmony that had hitherto existed between us, and might have led to consequences not likely to have proved to his advantage.

* The tree from which these staves are cut, in the language of Nukahiwa, is called *fau*; it is perfectly white and very light.

He assured me that he had never feared I should use him ill; but that the Frenchman had told him, I should put him in irons without fail unless the hog was brought on board; and this he had believed: my suspicion therefore of the Frenchman was verified. I made several handsome presents to the king and his family, and endeavoured to convince him, that unless I was very much provoked, I never would resort to violence against any one, and still less against him who was my friend.

After resting, and refreshing ourselves with cocoa-milk, we went, under the guidance of Roberts, to a morai or burial-place; but before we quitted the king's house, we were shewn his grand-daughter, who, as well as all the children and grandchildren of the king's family, is looked upon as *etua*, a deity. She had a house of her own, to which her mother, grandmother, and her nearest relations alone were allowed free admittance; the house being to all others *tahbu*. The king's youngest brother had this young goddess, a child about eight or ten months old, in his arms: I inquired how long the mothers use to suckle their children here, and was told that, with very few exceptions, they never nurse their own children; but as soon as a child is born, the nearest relations, among whom a dispute generally ensues which shall be its foster-mother, take the infant from its mother and carry it home with them: the child is not nourished with its mother's milk, but fed upon fruits and raw fish; and yet the men of Nukahiva are of a colossal stature.

We set out on our way to the morai, passing by some mineral

springs, of which there are several here. The morai was situated on the top of a pretty high hill, which it cost us some trouble to climb, as the sun was near its height; it was in a thick wood, interwoven with bindweed, and seemed to be nearly impassable: we saw a bier upon a stand, but of the body upon it, nothing but the head was visible. In the outer circle were some statues carved in wood, intended to represent the human figure, and evidently the coarse work of some unskilful artist; near to these statues were some pillars wrapt up in cocoa-leaves and a white cotton stuff. We were curious to learn what was the intention of them; but could obtain no answers to our inquiries, than that they were tahbu.—Near the morai was the priest's house, whom however we did not find there. Every family has its separate morai: the one we visited belonged to the priests; and without Roberts, who reckons himself one of this, as well as of the king's family, we should perhaps not have seen any, for they are unwilling to shew them. In general they lie a good way inland upon hills; but this was an exception, not being far distant from the beach.

After Dr. Tilesius had made a sketch of it, we set out on our return to the boats: we could not however withstand the request of the friendly Roberts, to visit his house; nor did we regret the little round we were obliged to make in order to get there. It was built after the fashion of the island, was quite new, and stood in the midst of a wood of cocoa trees. Upon one side flowed a small stream, and upon the other, in the middle of a rock, was a spring of mineral water. We all seated ourselves round his house on the rocks which formed the banks of the rivulet, and refreshed ourselves, in the shade of the lofty cocoa trees

after our walk, which, owing to the extreme heat, had greatly fatigued us. About twenty of the islanders were busied throwing down cocoa-nuts from the trees, which others cleared of the husks, and broke with great skilfulness. The kernel quieted the hunger we began to feel, and we quenched our thirst with the fine cold milk, which was extremely refreshing. Roberts's wife, a pretty young woman of about eighteen years of age, seemed in some measure to have departed from the custom of her country, and, in our opinion, very much to her advantage; for she had not rubbed her body over with cocoa-oil, which, although it gives great lustre to the skin, produces a very powerful smell.

About one o'clock we got back very well satisfied with our excursion. The news of our visit to the king had, in all probability, spread itself immediately; for we found several persons upon the beach as usual, and upon our arrival on board the trade with the inhabitants had again resumed its vigour.

I had sent Lieutenant Löwenstern on the 11th May to examine the coast of Nukahiwa to the west of the bay of Tayo-Hoae; and in this excursion he had discovered a harbour about five miles from the bay, of which he brought me so favorable an account, that I determined to visit it, and went there on the 15th accompanied by Captain Lisianskoy, Lieutenant Löwenstern, Drs. Horner, Tilesius, and Langsdorff, and some officers of the *Neva*, in two boats, carrying with us several articles for trade and presents; as we hoped in this new bay to meet with a supply of provisions. After rowing about an hour and a half, we arrived there at ten in the

morning. At the entrance of the bay, the west side of which was formed by lofty and perpendicular rocks of a very wild but beautiful appearance, we found twenty fathoms water over a bottom of fine sand and clay. As you advance, on the east side there is another bay apparently strewed with rocks, and quite exposed to the west, which occasions a very heavy surf. After passing the western point of this rocky bay, you open upon the finest bason that can be imagined: it lies in a north-east and south-west direction, is about 200 fathoms deep and 100 wide: at the bottom of it is an even sandy beach, and behind this a green flat resembling a most beautiful bowling-green. Streams of clear water flowed in various places from the mountains that rise beyond the beach and the green flat behind it; and in a very picturesque and inhabited vale, lying a good deal to the northward of the entrance, and by the natives called Schegua, is a rivulet, which, considering the size of Nukahiwa, cannot be deemed small, that empties itself into the northern side of the bay. As this side is exposed to the wind, the surf renders the landing here more difficult; yet I think that at high water a boat of inconsiderable burthen, would have no difficulty in entering the rivulet: at all events, there can never be any in procuring water here; for you have only to anchor your boats just outside the breakers, and the natives, as I have already observed, will, for a few small pieces of iron, not only fill your casks, but swim with them to you through the surf.

The bason is so completely land-locked, that the most violent storm would scarcely have any effect upon the water, and a ship in need of repairs could not wish for a finer harbour, for such a purpose. Not quite fifty fathoms from the eastern shore,

the water is five fathoms deep, and at ten fathoms from the beach, there is not more than ten or twelve feet depth; a ship might unload here with the utmost convenience, and even if she did not want repairing, I should prefer this harbour to the bay in which we anchored. Of cocoa-nuts, bananas, and breadfruit there is here a superabundance; but the scarcity of animal provisions is perhaps as great as in Tayo Hoae. The chief advantage which this bay possesses over the others is, that, as you can anchor about a hundred fathoms from the land, the king's house and all the habitations of the valley lie so completely under the guns of the ship, as to render an attack on the part of the natives quite impossible. This same reason makes it unnecessary to send a covering party with any boat going on shore, as you must do in Tayo Hoae, where the ship cannot anchor within less than a mile and a half of the beach; besides that in the latter place, the shore being either swampy or covered with large stones, renders it necessary to go inland in order to feel the beneficial effects of a wholesome land air. It would be very difficult, too, to find a commodious situation in the neighbourhood for an hospital, and in case it were wished to erect the observatory, it could only be done at the risk of having the instruments destroyed, as the landing, on account of the heavy surf, is extremely difficult; while in the new bay, on the contrary, the observatory might be erected on the green flat close to the beach, as well as an hospital, if it were desired; nor can any walk be imagined more beautiful than the one along the rivulet in the vale of Schegua. There is likewise no danger of any sudden attack, if such an event were meditated, in the neighbourhood of the ship, as the path from Schegua to this green flat, is either over rocks, which form the northern shore,

or over several hills, exposing the assailants to be seen long before they could reach the ship. The chief fault of this harbour is the narrow entrance to it from the sea which in one part is only 120 fathoms wide, but though this small entrance is of course attended with difficulties, it is by no means dangerous; for the depth being from 15 to 20 fathoms, it is very easy to warp out if the wind be moderate; even from Tayo Hoae, it is scarcely ever possible to get out without warping, as we found by experience.

The natives had no particular name for this harbour, but they call the vale in which the houses are situated, Schegua. I have therefore named it Port Tschitschagoff in honor of the minister of marine. It lies in latitude $8^{\circ} 57'$ S. and longitude $139^{\circ} 42' 15''$ W.

Much as I was pleased with the country near the houses of the king of Tayo Hoae and of the Englishman Roberts, I thought the vale of Schegua by far more beautiful. The rivulet flowing at the foot of a chain of lofty mountains through the valley, and which was rendered more beautiful by the abrupt descent of its bed, added certainly very much to the appearance of this place. The inhabitants had built their houses on the left bank of the stream, and they seemed to be more comfortable than those of Tayo Hoae; the men also wore a much better appearance. There were several larger plantations of the taro root and cloth mulberry, and, what constituted their chief wealth, a number of hogs, but of these they were equally avaricious, and we could not purchase any. The king

of the valley, whose name was Bauting, and whose gigantic stature rendered him very conspicuous, was the only one who brought a hog for sale; but he could not prevail on himself to part with his treasure, and after having concluded his bargain four times, and at last on very advantageous terms to himself, he immediately repented of it and returned us our goods, though he was highly pleased with them. Much as I was vexed at his selfishness, or rather indecision, I did not quit him, however, without making him some presents. Our arrival seemed to have given universal satisfaction; every one smiled upon us, and we did not remark any disorderly shouting or impertinent curiosity, although we were the first Europeans who had ever landed among them. They all brought bananas and bread-fruit for sale, for which we gave them small pieces of old iron hoop. The women of this valley were very different from those of Tayo Hoae; they were invariably better dressed, and two of them might really be reckoned very handsome; none of them were quite naked, but all were wrapt up in long shawls of a yellow colour, and were particularly distinguished from their neighbours by a piece of white stuff which they wore with much taste as a turban, and which was very becoming to them. They were all well rubbed over with cocoa oil, which, on account of the lustre it gives to the skin, they consider as a great ornament: we did not remark this polish when they first came to meet us in Port Tschitschagoff upon our landing, their curiosity to see us having perhaps prevented them from adorning themselves; but when after a few days we returned to Schegua they received us with much greater splendour. Their hands and arms and the lobes of their ears were all tatooed, they had even upon their lips some tatooed streaks. They did not ap-

pear possessed of any more delicate notions of modesty and female reserve than their neighbours of Tayo Hoae, and took particular pains to become better acquainted with their new guests; their pantomime being so supplicating and at the same time so expressive, as to render it impossible to mistake their meaning. The people who stood around approved in the highest degree of their grimaces; they appeared to have been called upon to play this part, and I must do them the justice to say, that, in the spirit of the female sex in this quarter of the globe, they played it remarkably well. As we passed through the valley, we saw, about a hundred paces from the king's house, a large even space, in front of which was a stone construction about a foot high and near a hundred fathoms long, displaying a degree of skill approaching to which we had seen nothing in Tayo Hoae. The foundation-stones were laid very even, and so closely united that no European workman could have joined them better: Roberts told us that this platform served the spectators as a seat at their great dances.

In the afternoon of the 4th we embarked, but the wind being against us, we did not arrive on board until eight in the evening. Drs. Tilesius and Langsdorff, who returned by land, were not back until the next morning: they were so wearied with their walk which led over very lofty and steep hills, as to find themselves obliged to pass the night in a house about half way, belonging to a friend of Roberts, who had acted as their guide on this journey.

On the 16th May we had completed our supply of wood and water, on the 17th at day break I unmoored, and at eight

we weighed anchor. As the harbour is surrounded by lofty hills which occasion an almost incessant shifting of the wind, it is very difficult to sail out, and we found it necessary to warp, notwithstanding the great distance and the extreme heat made the task very laborious. At first the wind blew pretty steady from the shore, and we had half crossed the bay, when it suddenly became so variable as to oblige us at every moment to put the ship about. The current carried us more and more to the westward, and compelled us to let go an anchor about 120 fathoms from the western shore; close upon the beach there were 20 fathoms of water, so that the great vicinity of the coast was not dangerous. We immediately carried out a kedge anchor, and began to warp into the middle of the bay, when on a sudden a gust of wind sprang up, which was at first too violent for our small anchor and forced us to let go another. The *Neva* had also to struggle with this treacherous wind; and perceiving the little success we had in attempting to sail out of the bay, she let go her anchor likewise, though at a greater distance from the land. We got out another warp anchor, and at four in the afternoon were again in the middle of the bay; the wind seemed disposed to be more favourable, and I ordered all the sails to be cast loose, in the hopes of still being able to get to sea this afternoon. But we were yet to be exposed to the caprice of the wind, for it veered round in the same moment, and for a third time obliged us to let go the anchor. The men had been since four in the morning constantly at work, with a heat of 23 degrees, and I therefore determined to pass the night here to enable them to rest. About eight in the evening the wind freshened, and continued so throughout the night; at day-break the next morning we sailed out of the bay, the

weather continuing as unfavorable as the day before. On a sudden it came on to blow hard with violent rain; and as the bad weather made me anxious to get clear of the land as soon as possible, I was obliged to carry the Frenchman, Joseph Cabritt, who had come on board late the preceding evening, and had kept out of sight, to sea with me. He appeared rather to rejoice at, than to regret, this circumstance, and I firmly believe he came on board with the intention of sailing with us: Roberts was thus, without thinking of it, delivered from his bitterest enemy.

But before I proceed with the history of our voyage, it will, perhaps, not be superfluous to add such account of the situation of the Washington islands, and of the manners and customs of the inhabitants, as, during our residence of ten days upon the island of Nukahiwa, the largest of the group, we were enabled to collect with the assistance of the two Europeans whom we found there.

CHAPTER VIII.

GEOGRAPHICAL DESCRIPTION OF THE WASHINGTON
ISLANDS.

First Discovery of the Washington Islands—Reasons why this Name should be preserved—Description of the Islands of Nukahiva, Upoa, Uahuga, Mottuaity, Hiau, Fattuuhi—Little Advantage which Ships would derive from touching at the Washington or Mendoza Islands—Description of the Southern Coast of Nukahiva, and the Bay of Anna Maria—Directions for entering it—Weather and Climate—Winds and Tides—Astronomical and Nautical Observations in Port Anna Maria.

THE group of Washington islands was discovered in the year 1791, by Captain Ingraham, of the American merchant-ship *Hope*, of Boston, in his voyage from the Mendoza islands to the north-west coast of America. A few weeks afterwards they were again seen by Marchand, in the French ship *Le Solide*, whose voyage has been so admirably related by that learned mariner Fleurieu. Marchand considered his as a new discovery, and landed upon one of the islands, which the officers of his ship called *Isle Marchand* after him, taking possession of it in the name of his government. He visited and determined the situation of the other islands; gave names to all of them, except to that of Uahuga, the easternmost one, which escaped his notice; and he called the whole group *Isles de la Révolution*. In the course of the next year these islands were again visited by two persons of different nations; Lieutenant Hergest

of the British navy and commander of the transport *Dædalus*, who had been sent out with provisions and other necessities to enable the celebrated Vancouver to pursue his voyage. He obtained sight of these islands in March 1792, surveyed them with great accuracy, gave them names, discovered two bays on the southern coast of Nukahiva, and landed in one of them which he distinguished as Port Anna Maria. Vancouver called the whole group Hergest's islands, in remembrance of his unfortunate friend,* whom he considered as the first discoverer. Some months after Hergest, an English merchant ship, the *Butterworth*, commanded by Captain Brown, sailed through these islands, but without giving them any new appellation,—a favour conferred upon them four times in the space of two years. He landed on the island of Uahuga, and examined its western coast. The last discoverer of these islands was Josiah Roberts, captain of the American ship *Jefferson*. Roberts had been three months in Taowatte, from whence, in 1793, a native of the island Uahuga conducted him to this spot; he is, perhaps, the first who gave them the name of Washington islands, as appears by *Rocheffaucault's Voyage in America*, which contains a short account of Roberts's discovery.† *Ingraham* had also called Uahuga by the name of Washington island;‡ it is uncertain which of the two was the first to introduce the name.

* Hergest, as well as Gooch the astronomer, who was sent out to join Captain Vancouver, was murdered in Woahoo, one of the Sandwich islands.

† *Voyage dans les Etats Unis par La Rocheffaucault Liancour*, tom. 3, p. 23. The names of the islands are however very much distorted, Uahuga for example is called Onhava.

‡ *Zach's Monthly Correspondence*, vol. 1, p. 348. Extract of the *Memoirs of the Massachusetts Company*, for the year 1795.

At all events the honor of the discovery of these islands belongs to the Americans; and whether Ingraham gave the name of Washington to one, or Roberts to all of them, it is but just that it should be preserved. Even Fleurieu rejects that of *Isles de la Révolution*, which Marchand, their second discoverer, assigned to them, without however adopting that of Washington; for he combines them with the group to the S. E. of them, known by the title of the Marquis de Mendoza's islands. It is without doubt a great advantage to geography to reduce as much as possible the names upon charts, and to bring as many islands as may be under one appellation; but should not an exception be made in favor of that of Washington, which must prove an ornament to any chart? Is it not according to the strictest justice, that the first discovery of the Americans should be preserved in the annals of naval history by a name peculiar to themselves? and is it allowed to strike out of the charts, the immortal name of the founder and protector of a great state, by which one of its grateful citizens had dedicated a new group of islands to it; merely to unite this group with another that had been discovered and named 200 years before? I leave it however to the geographers, to admit or reject my proposition, and in the mean time have preserved to these islands the name of Washington upon our charts.

They lie to the N. W. of the Mendoza islands, and consist of the following eight islands, stretching from the $9^{\circ} 30'$ to the $7^{\circ} 50'$ of S. latitude, and the $139^{\circ} 5' 30''$ to the $140^{\circ} 13' 00''$ of W. longitude. As some charts omit the proper names altogether, I shall mention them, with those assigned to each of them by their different discoverers.

1. Nukahiwa.*—This island is the chief of the group: its greatest length from the south-east to the west point is about seventeen miles; but I cannot speak positively with regard to its circumference, as we did not examine the north side. Its direction from the south-east to the west extreme is E. N. E. and W. S. W.: from the south point it runs in a northerly line, and probably then N. E., as from the south-east point it trends due N. This, which Hergest called Cape Martin, is, by our observations, in latitude $8^{\circ} 57'$ and longitude $139^{\circ} 32' 30''$. The south extreme is $8^{\circ} 58' 40''$ S. and $139^{\circ} 44' 30''$ W. and the N. W. point $8^{\circ} 53' 30''$ S. and $139^{\circ} 49' 00''$ W. Ingraham called this Federal Island, Marchand Isle Beaux, Hergest Sir Henry Martin's Island, and Roberts gave it the name of Adams island.

2. Uahuga lies the most to the eastward of this group: the west end by our observations lies in latitude $8^{\circ} 58' 15''$ S. and longitude $139^{\circ} 13' 00''$ W. 87° S. E. of point Martin in the island of Nukahiwa, from whence it is distant eighteen miles. Its direction is E. N. E. and W. S. W. and its extreme length nine miles. On its west side is a bay, but we did not examine it: Marchand was not aware of this island at all; Ingraham named it Washington island, Hergest Riou island, and by Roberts it was called Massachusetts island.

3. Uapoa is the southernmost of the Washington islands. Its

* During our stay upon the island of Nukahiwa, I took great pains not only to learn the name of it correctly, but to ascertain, as nearly as possible, the particular properties of their language, to enable me to write the names with accuracy. In no instance have I met with the letter R, with which Wilson begins the names of several islands.

northern end bears directly S. of Port Anna Maria, distant about twenty-four miles: and is by our observations in $8^{\circ} 21' 30''$ S. and $139^{\circ} 39' 00''$ W. The officers of the *Solide* called this island *Isle Marchand*, Ingraham named it *Adams island*, and Roberts *Jefferson island*. As we did not sail round it we saw nothing of the rock shaped like a sugar loaf, called by *Marchand Le Pic*, and by *Wilson* six years later, the *Church*, and of which *Hergest* in his description of the island * says that it resembles a cathedral church in the Gothic taste; neither could we see the white rock that *Marchand*, on account of its shape, called *Obelisk*, and which is probably the same that *Wilson*, in his chart, has denominated *Stack island*.

4. At the distance of about a mile and a half to the S. E. from the southern point of *Uapoa*, is a small flat island about two miles in circumference, which *Marchand* called *Isle Platte*, *Ingraham* *Lincoln*, *Wilson* *Level*, and *Roberts* *Revolution Island*. I could not learn the proper name of this island, which, according to *Marchand's* observation, lies in latitude $9^{\circ} 29' 30''$ S. The strait between this and *Uapoa* must be safe, *Roberts* having sailed through it.

5, 6. *Mottuaity*.—Two small uninhabited islands, lying E. and W. of each other, and separated by a channel about a mile wide. They lie N. W. by W. of the south extreme of *Nukahiwa*, distant about thirty miles. The inhabitants of the adjoining islands visit them on their fishing excursions: but they never undertake this voyage but when driven to it by the

* *Vancouver's Voyage*, 2d vol. quarto edition.

greatest necessity; even this trifling navigation, owing to the indifferent construction of their canoes, being attended with considerable danger to them. The situation of these two islands, which we did not perceive, is given differently by Marchand and Hergest, though the latitude varies only a few minutes; but as we found Hergest's longitude of Nukahiwa to agree with ours, determined by a series of lunar observations, as mentioned in the sixth chapter, I shall give the preference to his description of the Mottuaity islands, namely $8^{\circ} 37' 30''$ S. and $140^{\circ} 20' 00''$ W. Ingraham called them Franklin and Roberts Blake island, probably at a distance mistaking the two islands for one, nor, indeed, have the inhabitants of Nukahiwa but one name for both of them.*

7, 8. Hiau, Fattuuhu.—Two uninhabited islands, the first of them eight miles long and two wide. The south point of Hiau lies, by Hergest's and Gooch's observations, who landed upon it and found a number of cocoa trees, in $7^{\circ} 59'$ S. and $140^{\circ} 13'$ W. The middle of Fattuuhu, a much smaller island, and of a similar form, is in $7^{\circ} 50'$ S. and $140^{\circ} 06'$ W. They lie about sixty miles N. N. W. of the west end of Nukahiwa; and the inhabitants of the neighbouring islands visit them for the sake of their cocoa-nuts. Ingraham called these two islands Knox and Hancock islands; Marchand named the first Masse, and the other Chanal; Hergest called them Roberts's islands, and Roberts gave to the first the name of Freemantle, and to the other that of Langdon island.

* Roberts frequently asked me to land his enemy, Joseph Cabrit, the Frenchman, upon one of these islands.

As the scarcity of animal provisions, which we felt even at Nukahiwa, the largest and, from the account of the inhabitants, most fruitful of the group of islands, is extreme, I feel it right rather to warn the navigator against them, than to recommend his touching either at the Mendoza or these islands, in his passage across this great ocean; the want of hogs being equally great at the Mendozas. Cook, the first of modern navigators who touched at these islands, obtained very few, in comparison of what he required for his ship's company, and Marchand, seventeen years later, still fewer in proportion. This impossibility of procuring a sufficient quantity of hogs, does not proceed so much from a scarcity of these animals, (although they are not in such plenty as the relation of different navigators describes them to be in the Sandwich and Society islands,) as from the unwillingness of the natives to part with them, on account of their custom of giving feasts upon the death of their chiefs, or priests, when hogs are considered as the most costly as well as the most dainty food. I have already described with what difficulty the king of Schegua prevailed on himself to sell one of his hogs, and how, after having several times concluded his bargain, he still would not part with this treasure, although he possessed several, and we counted a considerable number in the valley. Even of vegetable provisions the supply is not very plentiful; for although a sufficient quantity of cocoanuts for daily consumption may be procured, this is all, and there are very few bananas and breadfruit, at least in Port Anna Maria; and in Port Tschitschagoff, though we procured more bananas, we could get no breadfruit. Ships, therefore, must not expect, after a voyage round Cape Horn, which, if they sail from a port in the Brazils, they have little chance of weather-

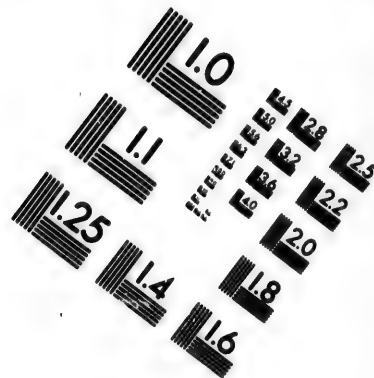
ing in less than three months, to be able to refresh their crews at these islands, sufficiently to prosecute their voyage either to America or to Kamtschatka, as it is very doubtful whether they can even supply them with provisions for their daily consumption. Wood and water are the only two articles they may depend upon procuring in sufficient quantity, and without the assistance of the natives, who swim with the water casks through the heavy surf, with a facility that surprises an European, while he is quite unable to imitate it, even this task would be very arduous, and might also prove dangerous; for upon any sudden disagreement the water party would be instantly cut off; and such a disagreement may easily happen, any slight misunderstanding giving rise to it, as we ourselves experienced. Ships bound to Kamtschatka by the way of Cape Horn, would therefore do better to sail directly from the Brazils to the Society islands, Bougainville's *Isles des Navigateurs*, or to the Friendly islands, where they may supply themselves at least for six or eight weeks with fresh provisions. The distance is likewise shorter, and would afford an opportunity of exploring the hitherto little known islands of these parts, such for example as the group of Fidji, Babacos, Hapae Vavao, &c. and of discovering others, that no doubt abound in this ocean. On the other hand, ships destined for the north-west coast of America or the island of Kodiak, would find it more advantageous to put into one of the ports of Chili, where they will not only find an abundance of provisions, but what is of the greatest importance to Kodiak and the colonies on the coast of America, may be supplied with Indian corn and wheat. The run from Chili to Kodiak is not too great; those who deem it so, may touch at the Sandwich islands, which do not lie much out of the way.

Although I have not spoken very favorably of the advantages of these islands, so far as regards the supply of provisions to be procured from them, I think it necessary to give a description of the bay of Tayo Hone and the southern coast of Nukahiwa, of which we were enabled to make an accurate survey. This coast consists of lofty rugged rocks, very steep towards the sea, and from which the most beautiful cascades of water are precipitated; among them one at the southernmost end of the island is particularly remarkable, nor would it be easy to meet with any thing more beautiful. The bed of this waterfall appeared to be several fathoms wide, and the water was precipitated from a rock, the height of which might be estimated at 2000 feet; this cascade, which was visited by Dr. Tilesius and Dr. Langsdorff, forms the river that empties itself into Port Tschitschagoff. The chain of rocks is connected with the lofty and for the most part barren mountains that compose the interior of the island, but to the north-westward of the southern point, the coast is lower and flatter, and rises gradually towards the centre; but we did not approach this side sufficiently near to distinguish any of the bays, that in my opinion must be found there, although from Hergest's description the west side is rocky and without a single one. The Englishman Roberts often told us of a valley on that side of the island, which he described as very populous and capable of raising 1200 warriors; but as he never was there himself, he could not inform us whether in the vicinity of this valley, the name of which is Hottyschewe, there is any harbour, where ships might anchor with security: on the east side, near the north extreme, is a bay, where the Neva first made acquaintance with the natives of Nukahiwa.

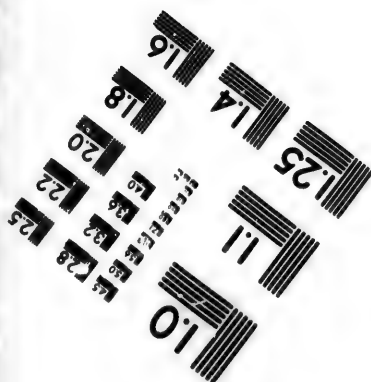
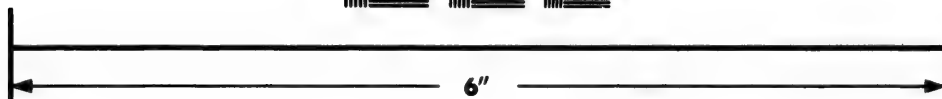
On the southern coast there are three harbours where ships may lie in perfect safety: Homé bay, which Hergest called Comptrollers bay, Port Anna Maria, and Port Tschitschagoff. Between Port Anna Maria and the latter, there are several small bays or bights, that do not, however, afford an anchorage, being too little defended from the wind, and full of rocks. In the preceding chapter I have sufficiently described Port Tschitschagoff, and we only sailed by Comptrollers bay without examining it, I shall therefore confine myself here to a description of Port Anna Maria.

As soon as you obtain sight of Nukahiwa, coming from the eastward, you immediately perceive Port Martin: it has a very striking appearance, and cannot possibly be mistaken for any other inlet of this island. The land adjoining it forms the east extreme of Comptrollers Bay; the point itself advances and consists of steep craggy rocks, that seem to have experienced some violent revolution; and a ship may approach within an English mile of this headland, as well, indeed, as of the whole southern coast, without danger, as there is a depth of from thirty-five to fifty fathoms over a fine sandy bottom. Shortly after, a black rock appears in sight about a quarter of a mile from Port Martin, which you leave on your right hand, when Comptrollers bay opens upon you lying north and south, and a little more to the westward is another smaller one. When Comptrollers bay is quite open, you steer parallel with the coast, the direction of which is E. N. E. and W. S. W. for five or six miles, until you perceive a small island called Mat-





Resolution test chart showing patterns of vertical and horizontal lines with numerical values ranging from 1.0 to 2.5.



Photographic Sciences Corporation

**23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503**

0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99

10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99

tau,* not more than thirty fathoms from the last point of the entrance. Upon opening this narrow passage you steer directly to the island, and pass within about 100 or 150 fathoms of it, when Port Anna Maria lies immediately before you. On the west side of the entrance is another island of the same size as Mattau, and like it separated from the main land by a channel about thirty fathoms wide, and only navigable for canoes. This small island, called by the natives Mutonoe,† may be known by a rock that lies about ten or fifteen fathoms from it. The islands of Mattau and Mutonoe form the entrance to Port Anna Maria, and care is necessary, both in entering and going out, not to approach too near to the westward island, or indeed to the westward shore, as an easterly wind, blowing even moderately, and a pretty strong current, render it dangerous. If there be a steady fresh breeze in the bay, the entrance is perfectly safe; and a vessel may near the coast on either side within fifty fathoms, or even still closer to the eastern shore, nor is there any thing whatever to render it in the least dangerous; but with a moderate and unsteady wind, such as generally prevails in the bay, owing to the lofty mountains that surround it, no reliance must be placed on these unsettled breezes which veer in one moment from east to west, now coming in violent gusts, and immediately after falling perfectly calm. Under these circumstances it is necessary to warp, which mode of getting in and out of the harbour, notwithstanding it is so labo-

* The natives have given it this name because they catch fish near it: Mattau in the language of Nukahiwa being a fishing line.

† Mutonoe signifies a large island, and this name is given it in derision of its small size.

rious, and on account of the burning heat so extremely fatiguing, is the only one to be depended on. About three quarters of a mile from the northern shore the bay stretches itself in an east and west direction: you then approach to about a quarter of a mile of a very prominent hill on the east shore, where the least uncomfortable landing place will be found, and bring up in about fifteen fathoms water, mooring with your anchors in an east and west direction, and at the distance of about half a mile from a small rivulet on the northern shore, where a supply of water may be procured. The east has a decided advantage over the other side, the currents not having the same effect upon the ship; and during our stay there of ten days, our cables were not once fouled, while the Neva, which lay on the west side, was obliged almost every day to clear her anchors.

The climate of the Washington as well as of the Mendoza islands, between which, owing to their vicinity, there cannot be much difference, must be always very sultry. In Marchand's voyage it is said, that at Port Madre de Dios in the island of Santa Christina, the thermometer stood at 27° in June. During our stay at Port Anna Maria, the greatest height the thermometer attained on board the ship was 25° degrees; but it generally stood at 23° and 24° , and the heat on shore was in all probability two degrees greater. Notwithstanding this the climate appears to be very healthy, and the Europeans whom we found here, assured us that it could not be more so: an assertion thoroughly justified by the fresh appearance of the natives.

The winter months, as is always the case between the tropics, constitute the rainy season; but this is said not to continue long in these islands, ten months and more frequently passing without a drop of rain. When this unfortunately happens, a general famine ensues attended with the most dreadful consequences, and inciting the inhabitants to acts of a more horrible nature than any other people can afford an example of.

The reigning wind between these islands is the south-east trade wind, which varies some degrees either to the east or south; south west winds* are however felt here, and blow for a pretty long continuance; when the inhabitants of these islands avail themselves of it to visit their neighbours to the south-east. In Port Anna Maria the land and sea breeze blew alternately every night and morning, but by no means regularly, and always very faintly; except now and then a violent gust of wind proceeding from the mountains and cavities between them.

I have already stated in the preceding chapter that no astronomical instruments were carried on shore; but from the observations which Dr. Horner made on the days of our entrance into, and departure from port, he determined a new rate for our watches.

On the 18th May, No. 128 was later than mean time at
Greenwich - - - - = 7h. 51' 24"

* The islanders have proper names for each of these winds.

And lost daily - - - - = + 21' 3"

No. 1856 was later than mean time at

Greenwich - - - - = 10h. 15' 08"

And lost daily - - - - = - 24' 50"

Pennington's small chronometer was found to be perfectly useless as such, and Captain Lisianskoy gave me a box time-keeper by the same maker. The daily rate of this watch, which on the 18th May was later than mean time at Greenwich by = 1h. 49' 09", was - 16' 40".

The latitude of the entrance of Port Anna Maria between the islands of Mattau and Mutonoe is $8^{\circ} 56' 32''$ S. The latitude of the watering place on the north side of the bay $8^{\circ} 54' 36''$ S.

The longitude of Port Anna Maria at the entrance, deduced from 42 sets of lunar observations taken by Dr. Horner and myself between the 29th April and 4th May, and from the 4th to the 7th May at noon, by a mean of the chronometer No. 128, reduced to its new rate of going, is $139^{\circ} 39' 45''$ W.*

The longitude by No. 128 according to its rate at St. Catherine's is - - - - $140^{\circ} 42' 30''$

By 1856, according to its rate of going at St. Catherine's,

* This determination of the longitude of Port Anna Maria agrees within one minute of that found by Lieutenant Hergest and the astronomer Gooch, but is nearly half a degree more to the eastward than Marchand states it to be.

which had increased two seconds at Cape Horn, it was found to be - - - - - = $141^{\circ} 29' 30''$

The variation of the compass by a mean of the observations made on the 7th and 18th May in the vicinity of the bay was found to be = $4^{\circ} 36' 30''$ E.

The heavy surf rendered any accurate observations on the ebb and flood almost impossible, but it was ascertained that they changed invariably every six hours, the flood setting from the east. At full and new moon it is high water between four and five o'clock; but although the height to which it rises cannot be correctly stated, it does not exceed three feet.

CHAPTER IX.

DESCRIPTION OF THE INHABITANTS OF NUKAHIWA.

Account of the Natives—Personal Beauty of the Men—Their strong Health—The Women—Tattooing—Dress and Ornament of both Sexes—Houses—Associations, Tools and Household Furniture—Their Food and Cookery—Fishing—Canoes—Cultivation—Employment of the Men and Women—Form of Government and Administration of Justice—Family Relationship—Art of War—Truce and cause of it—Religion—Mourning Ceremonies—Tahhu—Charms—Roberts—Music—Population—General Remarks upon the Inhabitants of this group of Islands.

ALTHOUGH of all the inhabitants of this vast ocean, I have only seen those of the Sandwich and Washington islands, still I think I may say, with some degree of certainty, that the latter are not exceeded by any of them in personal beauty; and from the description in Cook's different voyages of the other islands of this part of the globe, their inhabitants will be found to bear no comparison with those of the latter group. Even the accounts given by Cook and Foster, of those of the Mendoza islands, leave no doubt of the fact; nor is their personal beauty, as in all the other islands of this ocean, a distinction which nature has giving to the chiefs or nobles, but exists here almost without an exception, perhaps, owing to the more equal division of property. The hitherto but little enlightened Nukahiwian does not acknowledge in the person of his king, a tyrant to whom he must sacrifice his best power and abilities, without daring to consider his own preservation, or that of his family. The very small proportionate number of nobles, who consist

only of the king's family, and the little authority which they possess, leave him more liberty to work, while they ensure to him a free possession of his land, so that, with very few restrictions, every one can have a share.

The Nukahiwiers * are invariably of a large stature, and well made; they are very muscular, with a long handsome neck; have a great regularity of countenance, and an air of real goodness which was not belied by their dealings with us: but when we consider the cruelties of which these men are capable, the prejudice in their favour which the beauty of their person is very likely to create, soon vanishes, and their countenance seems to indicate nothing but apathy. An animated eye none of them possess. By tatooing their bodies very much, and rubbing them with a dark colour, they acquire a black appearance; otherwise their natural colour is clear, at least that of the boys and women who are not tatooed, was so; nor do they differ very much from the colour of Europeans, being only rather more yellow. These islanders are besides remarkable for having no deformed persons among them, none of us at least saw any, and their bodies are besides very free from biles and sores, owing to their great temperance; for the custom of drinking kava, so common to all the islands of this ocean, and the immoderate use of which is so prejudicial to the health, as frequently to occasion a distortion of the body, is

* I can only speak of the inhabitants of this island whom I know: but the description of the Nukahiwier will refer equally to the natives of all the group of Washington, as well as Mendoza islands, among whom there is a perfect resemblance in language, government, manners and customs.

only known here to a few, and is never observed but with the greatest temperance. The Nukahiwars are in the enviable possession of the most constant health, and they have hitherto been so fortunate as to escape the venereal disease: as they are free from complaint, so they are ignorant of all medicine. Their fear of the kaha, a species of charm supposed to produce sickness, and of which I shall speak hereafter, increases perhaps, by its influence on the imagination, any disposition to illness; but its remedy, the removal of the charm, sufficiently distinguishes it from common disease; and their whole medical system consists in binding up wounds, in which the king is said to be particularly skilful.

Among the very handsome people of this island, we observed two in particular who excited the admiration of us all. The one was a great warrior of Tayo Hoae, and, at the same time, what, in the language of the country, is called Fire-lighter to the king;* his name was Mau-ha-u, and he was perhaps one of the handsomest men that ever existed: he was six feet two inches high, and every part of his body perfectly beautiful. The other was Bauting, king of the vale of Schegua, who, notwithstanding his age, for he certainly was not less than fifty, was still extremely handsome.

The women all looked well; at least nothing could be said against their countenances. A well proportioned head, a face rather round than long, a large sparkling eye, blooming

* I shall hereafter have an opportunity of relating wherein the business of Fire-lighter consists.

colour, very good teeth, curled hair, which they ornamented with a white band, in a manner very becoming to them all, and the remarkably clear colour of their bodies, may perhaps entitle them to a preference over the inhabitants of the Sandwich, Society and Friendly islands;* yet an impartial eye might perceive many faults in them, which the companions of Mendaña and Marchand either overlooked, or would not discover. Their form, for instance, is any thing but beautiful; their person is generally short, and without carriage, and this is the case even with girls of eighteen; their gait is likewise awkward and unsteady, and their lower stomach particularly large: their ideas of beauty must be very different from ours, otherwise they would take more pains to conceal their defects; a piece of stuff of middling size, wrapped carelessly round them, being the only covering, and that an incomplete one, of their beauties as well as their imperfections. Thomson's

"When unadorned adorned the most,"

cannot be well applied to the Nukahiwiers. The expression of mildness and feeling common among the females of Otaheite, and even the countrywomen of Waini,† in whose looks it is not to be mistaken, would be sought in vain here: instead of

* In the vale of Schegua in particular, we saw several who looked remarkably well, and adorned themselves with more taste than their neighbours of Tayo Hose.

† This was the name of a girl of the Sandwich islands, whom Mrs. Barclay, while accompanying her husband on his voyage to the north-west coast of America, took with her from Owaihi, with the intention of carrying her to Europe, but left her in China. Captain Meares was to have conveyed her back to her own country, but she died on the voyage. See the portrait of this beautiful girl in Meares's Voyage, page 27 of the original edition.

this, they are remarkable for a degree of lewdness, (for coquetry would be much too mild an expression,) which utterly destroys the charm of their few personal advantages with all but the coarsest of mankind.

As soon as a Nukahiwier arrives at the age of puberty, his whole body is tatooed; an art carried to a much greater perfection in this island, than in any other; as they paint, in fact, their bodies with different figures, rubbing a pleasing colour into the skin, which is first scratched until it bleeds. Black is the colour generally used for this purpose, which after some time takes a bluish tinge. The king, his father, and the high priest, were the only persons who were coloured quite black, nor was any part of their bodies left unadorned; the face, eyelids and even a part of their heads, from which the hair had been shaved, being tatooed. Neither in the Society nor in the Friendly islands is this customary: in the latter the king alone is not tatooed; and it is only in New Zealand, and the Sandwich islands, as Captain King relates, where the face is tatooed. The New Zealander and Nukahiwier have a similar mode of performing this operation: for instance, they not only mark the body with single upright figures, or animals, as in the Sandwich islands; but represent upon it, in the most perfect symmetry, connected ornaments in concentric rings, and knots, which add greatly to the beauty of its appearance. The women only tatoo their hands and arms, the ends of their ears, and their lips. The lower classes are less tatooed, and many of them not at all; and it is therefore not improbable that this ornament serves to point out a noble, or, at any rate, a distinguished personage. There are some among

them, who have particularly acquired this art, one of whom took up his residence on board the ship, where he found sufficient employment, as almost all the sailors underwent the operation.

The men are not circumcised, but some of them had the foreskin cut straight down, which is said to be done with a sharp knife; and, like the inhabitants of St. Christina, they tie the extremity with a knot. That this, as Fleurieu states, should be done as a protection against vermin, or as a refinement in sensuality, is not likely; and the contradictory notions of modesty, apparent among them, make it much more probable, that their whole sense of shame is founded on the wish to conceal from the other sex what nature herself has covered. At any rate, the modest beauties who swam round our ship, expressed a great degree of horror, when the accidental wants of one of the crew shocked their eyes with such a sight; and Roberts confirmed this notion, adding, that the women of Nukahiwa are quite obdurate with regard to those, who do not observe this fashion.

The men always go naked, and in this respect even the king was not different from the rest; for I do not consider as clothing, the small coarse piece of stuff, made of the bark of the cloth-mulberry plant, which they wear round their loins. This girdle, in the Friendly islands called *maro*, is known to the Nukahiwiers by two different names, according as it is made of coarse or fine stuff. The first kind they call *tschiabu*, and the latter *eatu*; and even this girdle is not worn by all the Nukahiwiers, for the handsome Mau-ha-u, for instance, always affected to go

naked; and, although on two occasions I presented him with a girdle, he came on board the next time without it. Mats are sometimes used among them, and the king's son-in-law, though he indeed was the only person, always came to the ship in one of a very coarse kind, and fastened under the chin in such a manner as merely to cover the back. Neither the nobility, nor even the king himself, have any state dress; and this is perhaps less owing to their republican disposition, than to their poverty, Captain Cook having seen the king of the island of Christina in a dress adapted to state purposes.

The people of Nukahiwa have no want of ornaments, nor do these appear to be in any way the distinction of the upper classes; for I never saw either the king, or any of his relations wear them, except his son-in-law, who had a boar's tusk or something similar to it in his beard. The ornaments are nearly the same as those which Forster found among the inhabitants of the Mendoza islands; boars' teeth and red beans being the chief articles here as well as there, and as he has given an exact description and drawing of most of them, I shall content myself with merely a short mention of them. The head-dress consists either of a large helmet of black cocks' feathers, or of a kind of diadem or band of woven cocoa fibres, ornamented with mother of pearl; or else of a ring made of a soft wood, from which a row of strings is suspended. Several wore broad leaves stuck in their hair: they adorn their ears with large white muscles of a circular form, filled with a hard substance like sand, to which a perforated boar's tooth is affixed for the purpose of fastening it to the ear; a small wooden peg that passes through the tooth, serving as a clasp to prevent its

falling out. But their chief attention is paid to the ornament for their necks; they have a kind of gorget, in the shape of a crescent, made of the same soft wood, to which several rows of red beans are affixed; and this ornament is the particular mark of a priest. Another sort of gorget is made entirely of boars' teeth fastened on to a band, woven with the fibres of the cocoa nut; and they also wear single boars' teeth, either suspended round their neck, or to their beards, and balls about the size of an apple, entirely studded over with red beans. They usually shave off their beards except a little tuft of hair upon the chin, and their head is also shorn except on two spots, from which tufts of hair grow like horns. But this is not the only manner of wearing the hair; many of them, particularly the lower classes, not having it cut at all; with them it was woolly and coarse, but not quite so much so as with the negroes of Africa.

The dress of the women consists of a girdle, drawn like that of the men between their thighs, and of a piece of stuff, which, as I have already mentioned, scarcely covers them, and hangs down to the calf of the leg; sometimes when they swam off to the ship, they threw away every thing, even to their *tschiabu*. They anoint their body every day with the oil of cocoa, which certainly gives it a great gloss, but is accompanied with a very disagreeable smell. Whether this is intended as an ornament, or to protect them from the rays of the sun, and from insects, against which the men preserve themselves by tatooing, and a yellow colour mixed with oil, rubbed over their bodies, I cannot positively determine; but I believe that both these purposes are effected by it. I have never seen any of them with

ornaments round their necks; but they all carry fans, shaped either like a lozenge, or a half circle, platted very neatly with grass, and coloured white with muscle-shells burnt to chalk; their hair is black and well anointed with oil, and tied up in a knot on the top of their heads.

The houses of Nukahiwa are generally long and narrow, built of bamboos and the stem of a tree, in their language called *fau*, interwoven with the leaves of the cocoa tree and fern: the wall at the back part of the house is higher than in front, and the roof, which is covered about half a foot thick with dried leaves of the breadfruit tree, is always sloped. The inside of the dwelling is divided into two parts, by a beam laid along the ground from one end to the other; the front is paved with stones, but the back part, on the contrary, is covered with mats, upon which the whole family sleep, without any distinction either of relationship or of sex: at one end is a small partition where they keep their most valuable effects; their calabashes, arms, clubs, drums, &c. are suspended from the roof, or hung along the wall: the door is in the centre of the house, about three feet high, and round this the whole family usually sit. At a distance of from twenty to twenty-five fathoms from the dwelling house, is another building of the same construction as that just described, and only differing from it by being about two feet higher; in front is a platform paved with stones, about ten or twelve feet wide, and running the whole length of the building. This serves them as a banqueting hall; but only the king, his relations, the priests, and some distinguished warriors can afford such a building, which supposes very considerable property; for the possessor of one has a number

of people constantly at his table, who form an association, and whom, however great the scarcity of provisions may be, he is always obliged to feed. The members of these clubs are distinguished by different tattooed marks upon their bodies; those of the king's club, consisting of twenty-six members, have a square one on their breasts about six inches long and four wide, and to this company Roberts belonged. The companions of the Frenchman, Joseph Cabritt, were marked with a tattooed eye, &c. Roberts assured me that he never would have entered this association, had he not been driven to it by extreme hunger: there was an apparent want of consistency in this dislike, as the members of these companies are not only relieved from all care as to their subsistence, but, even by his own account, the admittance into them is a distinction that many seek to obtain. I am therefore inclined to believe, that it must be attended with the loss of some part of their natural liberty; for it cannot be supposed that a people so little virtuous in themselves, would exercise such a degree of hospitality and love of their fellow creatures, without any prospect of return. The king gave us several examples of his want of liberality, or rather of his greediness; nor did he, in any instance, afford a single proof of his gratitude or benevolence.* A person of this character

* On every visit I made the king presents, certainly of no great value in themselves, but of some importance to a Nukahiwere; yet he did not even once bring a cocoa nut in return; and when, upon the misunderstanding which, as I have related in the seventh chapter, nearly led to a dispute, he came on board and brought me a pepper plant as a proof of reconciliation; he seemed even to regret this present, and in about half an hour afterwards asked me, in case I should make no use of it, to return it to him.

cannot be expected to feed constantly a number of men without some remuneration; and this, people possessing no property can only make by a sacrifice of part of their natural liberty and independence. This is the usual consequence of all political relations; the path to despotism is of a gradual ascent, and in a few years the king of Nukahiwa, who is now only the richest citizen of the republic, and does not possess the least power over the poorest inhabitant of the valley, excepting his associates, will in all probability become as absolute as the king of Owaihi. The female sex is never allowed any share in the meals given at these clubs, and the house is perfectly tahbu to them: yet this does not deprive them of the privilege of eating with the men when they are at home; neither are they forbidden to eat pork, although it is but seldom that they get any; * Roberts assuring me that he was the only one who did not deny his wife this delicacy.

From ten to fifteen paces from their houses are several holes, paved with stones and covered over with branches of trees and leaves. In these they keep their provisions, consisting chiefly of baked fish and of sour pudding, a kind of dough made of the taro root and breadfruit. Their cookery is very simple; for except hogs, and these, the Englishman told us, they dress in the Otaheite fashion, their chief dish is this sour pudding, which is not disagreeable and may be compared to an apple tart: besides these they eat yams, taro, bananas, and breadfruit. They bake their food upon banana

* In almost all the islands of these seas, both the one and the other are forbidden to the female sex.

leaves that serve them as well for dishes. Their manner of eating is highly disgusting; they snatch up the sour pudding with their fingers, and carry it with great greediness to their mouths; at least this was the way in which the king ate at his meals, and some idea may be formed of the rest by him; but I must add in his justification, that he washed his hands as soon as his meal was finished.

Their tools are extremely simple, and consist of a pointed stone to bore holes with, and an axe made of a flat black stone. This latter they never use but in the total absence of all European tools; for the smallest piece of iron that they received from us, they instantly fastened to a handle, after sharpening the edge of it. I have, however, seen a stone axe made use of in the construction of a canoe. Their household utensils consist of cocoa shells, hollowed pumpkins, or as they are generally called calabashes, large covered dishes of a thin brown wood in the shape of muscles, fishing rods and lines, and sharks' teeth which they use as razors. The calabashes and cocoa shells are mostly ornamented with the finger and arm bones of their enemies, whom they have devoured.

Their arms consist of clubs, spears, and slings. The clubs are about five feet long, of casuarina wood, beautifully polished, and very massy, not weighing less than ten pounds; and at their extremity is a carved human head. The spears are of the same wood, ten or twelve feet long, about an inch thick in the middle and sharp at each end. Their slings are simply a woven band, broad and flat in the middle to admit the stone.

DESCRIPTION OF THE INHABITANTS OF NUKAHIWA. 163

The Nukahiwer has a manner of fishing quite peculiar I believe to himself.* They first bruise between stones a species of root that grows among the rocks; the fisherman then dives and strews the bottom with this mashed root, which stupifies the fish to such a degree that they immediately rise to the surface of the water, and are taken without any trouble: they likewise catch fish in nets, but I believe this the least usual way, as in all the bay of Tayo Hoae there were but eight canoes. The third mode of taking fish is with a hook, made very neatly of mother-of-pearl. The fishing line as well as all the string they use, either in the fitting out of their canoes or for other purposes, is made of the bark of the fau tree; but they make another kind of string very smooth and strong of the fibres of the cocconut. Fishing is, however, an occupation despised by those who possess a piece of land of any extent: and only the poor class of people, who maintain themselves in this manner, give themselves up to it. Although they knew that we would pay them well for fish, they only brought us twice, seven or eight bonitos; a proof that there are but few who employ themselves in this way, and who have not land to cultivate.

The Nukahiwa canoes are invariably fitted with outriggers; they are built of three different kinds of wood, on which their goodness depends. Those of the breadfruit and mayo tree are of less value than the others, constructed of a tree called by the Natives, tamana; these are more durable, and swifter than the former. They are all very strongly built, and sewed together

* At Surinam I have since seen a method which has some resemblance to it.

with threads made of the fibres of the cocoa-nut ; the largest we saw was twenty-three feet long, two and a half wide, and two and one third feet deep.

As the Nukahiwiers know but few wants, cultivation has made very little progress among them ; and less attention is paid to it in this island, than, according to account, in any other of this ocean. There are plantations of cloth-mulberry, taro root, and the pepper plant ; but, comparatively speaking, very few, as not merely the want of taro, but the very simple and poor clothing of the inhabitants sufficiently proved. The breadfruit tree, the cocoa, and the banana plant, require no attention, and give very little trouble in transplanting, nothing more being necessary than to dig a hole and to set a branch in it ; in a month's time the plant is in full growth, and all farther attention unnecessary. Agriculture employs the men very little ; fishing they neglect, perhaps because it is attended with some trouble as well as danger. The only work of consequence is the construction of their houses and their arms, and even this can occupy them but seldom. Thus their whole lives must be spent in idleness, and, according to the Englishman's account, they really pass the greatest part of the day lolling on mats with their wives. The women have various employments ; they make twine for several purposes, and fans for themselves and their husbands ; but their chief employment is making cloth, of which there are two kinds : one coarse and of a greyish colour, made of the fibres of a tree, is used for tschiabus or girdles, and the poorer class dye it of a yellow colour, and wear it for clothing. The second sort, of which the women make their headdress and clokes, is very fine,

and of a brilliant white, and is made of the cloth-mulberry shrub. The fine stuffs are considerably smaller than the coarse, and not so strong and close; at any rate I never saw a single piece that was not weak and full of holes.

I have already had occasion to mention that the form of government is any thing rather than monarchical; the king is not to be distinguished either by his dress or by his ornaments from the lowest of his subjects: they laugh at his orders, and should he venture to strike any one, he would infallibly meet with a like return. Perhaps in time of war he may be considered as chief of the warriors, and may then possess some authority, but from their manner of fighting, it can scarcely be supposed that he alone is their leader. The strongest and most intrepid probably directs, by his conduct, the actions of the rest, and I conceive on that account the authority of the king, even in such times, to be doubtful. I am convinced too that Kette-nowee plays a much less brilliant part in the field of battle, than his fire-maker Mau-ha-u. The chief advantage possessed by the king, and the only one that can be spoken of with any degree of certainty, consists in his greater wealth, by which he is enabled to provide for a larger number of persons.

As the king does not possess the least power, no kind of justice can be executed here: stealing not only is not held a crime, but on the contrary is considered as a particular merit in those who evince adroitness: * adultery is only a crime in the royal

* I must, however, do the Nukahiwiers the justice to say, that on board the ship they

family; murder alone is not allowed to pass unnoticed; not by the king and the priests, but by the relations and friends of the slain, who seek revenge and will have blood for blood.

From the information which I collected of their family connections, they do not appear to be of the happiest nature. Although the Nukahiwera has so far removed himself from the brute creation, that the generality of the women are bound by connubial vows, still this oath is very little observed by any of them. It is probably an agreement to live together, arising either from a mutual inclination or interest; and is afterwards continued from habit, or from the original motive still remaining in force; and notwithstanding the shortness of our stay here, we found sufficient to convince us, that the virtuous ideas of the duties and relations of a married state, avowed by some of the people of this ocean, even to an extraordinary degree, are entirely unknown in Nukahiwera:—in a word adultery is a crime tolerated by them all.* The shocking consequences of this brutal mode of life are in no cases so apparent, as in the indifference with which, during a famine, a Nukahiwera will murder his wife, to satiate his hunger with her flesh; and he butchers his child and devours it with the same voracity. But perhaps the Nukahiwera would never have been capable of so monstrous an act, if he had not well grounded reasons to doubt

seldom gave us an opportunity of admiring their skill in stealing; probably the constant watch kept with a loaded musket, and of which they had a perfect idea, deterred them from it.

* The Frenchman, who during a residence of ten years was become a perfect Nukahiwera, considered it as a great proof of the refinement of his new countrymen, that the brother and sister did not sleep together.

whether the child really were his own ; and I imagine that Roberts was urged by vanity, in attempting to rescue the honor of the royal family, to which he belonged, when he declared that the king and all his relations had a right to kill their wives, if ever they found them in the arms of another. If such a case had really occurred, other causes have in all probability given rise to so violent an example ; since from his own account, the ladies of the royal family set but very little value upon conjugal fidelity ; nor could we observe more moderation in them, than in any others of the sex.

A very important member of the royal family is the *firemaker* : his duty consists partly in being always near the king's person to execute his orders ; but the business wherein his master generally employs him, is of a nature perfectly characteristic of the monarch of Nukahiwa. On quitting his house for any time, his firemaker does not accompany him, but must, in every sense, represent his person with the queen, who finds in him a second husband during the absence of the first. He is the guardian of her virtue, and his reward the enjoyment of that which he has to protect. The kings of Nukahiwa probably have a notion that it is better to share with one, what would otherwise be divided among several ; but perhaps the duty of firemaker is only a royal luxury with him. The herculean Mau-ha-u filled this post near the queen of Taye Hone ; but he certainly did not merit the confidence of his sovereign, for he appeared to be a very bad guardian of the morals of his wife.

It may easily be imagined that a people who find pleasure in eating human flesh, will frequently wage war with their

neighbours to procure some of this delicacy, although there should be no other sufficient reason for it; and in their art of war, there is a perfect similarity between the character of these savages, and of wild beasts. They seldom meet in large parties in the field; but their usual mode of warfare is, to be constantly watching for, and secretly seeking to butcher their prey, which they devour on the spot. He who evinces the greatest skill in these arts, who can lie the longest on his belly perfectly motionless, who can breathe the lowest, run the swiftest, and spring with the greatest agility from one precipice to another, acquires no less reputation among his comrades, than the brave and powerful Mau-ha-u. In all these attainments the Frenchman particularly excelled, and he has since frequently amused us with a relation of his exploits, and of the numbers whom he has slain, in this mode of warfare; entering into a particular detail of all the circumstances. But he assured us, and even Roberts his enemy did him the justice to acknowledge, that he had never eaten human flesh, always exchanging his victims for hogs.

It is with the natives of the neighbouring valleys, such as Home, Schegua, Hottyschewa, that those of Tayo Hoae wage a continued warfare, as well as with the inhabitants of another valley far inland. The warriors of Home, whose number is about 1000, have a name peculiar to themselves, Tai-pihs; which signifies warriors of the great ocean; with these tai-pihs the people of Tayo Hoae do not carry on war by sea, but merely by land. The reason is singular and deserves notice, since it proves, that although the king is held in but little consideration, very much respect is paid upon some occasions, to the persons of the royal family; a circumstance per-

haps arising from some ancient superstition. The son of Kettenowee is married to the daughter of the king of the Tai-pihs ; and as she joined her husband by water, the sea which divides these two vallies is *takbu*, that is to say, must not be contaminated by any blood. If the young prince should quarrel with his wife, and she should return in consequence to her parents, the war which can now only be waged by land, would again commence by sea. But if she should die in this valley, an everlasting peace would ensue, because the spirit of this royal personage, who is considered as *etua*, a deity, would hover over these regions, and its rest must not be disturbed. A similar fortunate union has set the inhabitants of Tayo Hoae at peace with those of another valley in the interior, the king of which is called *Mau-day*, (signifying head of the warriors,) and who is said in times of war to be able to raise 1200 fighting men. He married the daughter of Kettenowee, and as no naval war can be carried on between them, they live in a state of perfect peace. *Mau-day* was almost always in Tayo Hoae, and after *Mau-ha-u* and *Bauting* was the handsomest man we saw ; he was likewise one of our daily guests.

The wars with the Tai-pihs are continued by land, until one of the two kings (and they have both a right to it) shall demand a truce for the purpose of celebrating their dance-feast, the Olympic games of these savages, and which according to their customs must not be deferred too long. In order to celebrate this they agree upon a term, and all parties, friends as well as enemies, assist in the preparations ; and as a proof that these coarse bloodthirsty men have no pleasure in a continued state of warfare, but are glad to live occasionally in peace and

security, they frequently prolong the time necessary to prepare for these feasts, which last only a few days. Six months had elapsed since the last truce was proclaimed, and eight months longer were to pass before the feast began ; although no other preparations were required than to make a new place upon which the dance is to be celebrated. After the termination of the feast, they return home, and the war recommences in all its vigour. From the moment a truce is announced, which is done by planting a branch of a cocoa tree on the top of the mountain, the war instantly terminates. But there is one exception when, not only in the time of their truce, but during that of their feast, in a word whatever may be the footing on which they are placed, neither the genius of peace, nor the spirit of an etua is sufficient to deter them from proceeding to hostilities. Whenever one of the high priests of the valley dies, three human bodies must be sacrificed to him. These are never chosen from among the people to which the priest belonged, but must be taken from some of the neighbours, and several canoes are immediately dispatched to procure them. If these should fall in with a canoe too weak to defend itself, having the proper number of victims on board, all hostilities again cease, and the sea is tahbu as before ; but if they do not succeed by sea, they land, lurk among the rocks, where the islanders often come in the morning to catch fish, and it is not long before they are enabled to offer up a sacrifice, to conciliate the deity with the spirit of the high priest. These are not devoured, but hung up on a tree until the flesh falls off the bones. If this sacrifice is not obtained the first day, the report of it spreads abroad, the rights of retaliation are asserted, and the war becomes general ; but these hostilities are seldom of long duration, as the number of vic-

DESCRIPTION OF THE INHABITANTS OF NUKAHIWA. 171

time necessary to be sacrificed is but small. During our stay in Tayo Hoae, a similar scene was hourly expected, the high priest lying at the time dangerously ill, and very little hopes being entertained of his recovery.

As there are priests among them it is natural to suppose a religion; but in what can the religion of a Nukahiwier consist? This much may indeed be inferred from their moral character, that it has never tended to ameliorate them. In all probability it serves only as a pretext for insuring a life of safety* to some of them, who by their absurdities, often bordering upon the most horrid crimes, find means to make the rest consider them as a necessary and holy class of men. A confused notion of a higher being, whom they call Etua, does indeed exist among them, but of these there are several kinds; the spirit of a priest, of a king, or of any of his relations, being an etua. They likewise consider all Europeans as such; for as their ideas do not extend beyond their own horizon, they are firmly convinced that their ships come from the clouds; and they imagine that thunder is occasioned by the cannonading of vessels which float in the atmosphere, on which account they entertain a great dread of artillery.†

The only good which they have derived from their religion

* The person of a priest is tahbu.

† The king's brother happened to be on board when a cannon was fired; he immediately cast himself on the deck, clung round the Englishman Roberts who stood near him; the greatest dread was painted in his countenance, and he repeated several times with a feeble voice, Matte, Matte.

is the tahbu, originating undoubtedly in some superstitious notion; for since nobody, not even the king, dares venture to break the slightest tahbu, it is a proof that some strange feeling inspires them with a reverence for this word. The priests only can impose a general tahbu, but every individual has a right to pronounce one upon his own property: this is done by declaring, if his wish be to preserve a breadfruit, or a cocoa tree, a house or a plantation, from robbery and destruction, that the spirit of his father or of some king, or indeed of any other person, reposes in this tree, or house, which then bears the name of the person, and nobody ventures to attack it. If any one is so irreligious as to break through a tahbu, and should be convicted of it, he is called kikino; and the kikinos are always the first to be devoured by the enemy, at least they believe it to be so, nor is it impossible that the priests should so arrange matters as that this really happens. The persons of the royal family and of the priests are tahbu, and the Englishman assured me that he was so likewise; and yet he often expressed his fear of being taken in the next war and devoured. In all probability he was at first considered like every other European, as etua, and only seven years acquaintance with him had worn away the lustre of his divinity.

Roberts was able to give me but very little insight into the religious opinions of his new countrymen, probably because their ideas are but confused upon this head; although perhaps he had not troubled himself to obtain any knowledge of them. The following he described as the usual funeral ceremonies, in which the spirit of their origin cannot be mistaken. After the corpse is washed, it is laid upon a platform, both being

covered over with a piece of entire new stuff, and the next day the family of the deceased gives a grand feast, inviting their best friends and relations. To these, at which the priests must always be present, the women are on no account allowed admittance; they produce their whole stock of hogs, (seldom eaten but upon these occasions,) of taro root, and of breadfruit, and as soon as the guests are assembled, they cut off the hog's head to propitiate the gods, and obtain for the deceased a safe and peaccable passage through the lower regions. This gift, which the priest takes possession of, is secretly devoured by him, and he only leaves a small piece of it under a stone. The friends or nearest relations of the deceased, must then watch for some months over the corpse, and rub it constantly with cocoa oil, to prevent putrefaction. By this continued application it becomes hard as a stone, and quite incorruptible. Twelve months after the first feast, a second equally extravagant meal is given to thank the gods for having permitted the deceased to arrive safe in the other world. After this the corpse is broken into pieces, and the bones are packed in a small box made of the wood of the breadfruit tree, and carried to the morai or burial place, where no woman is allowed to approach under pain of death.

An universal belief in charms, which all these islanders consider as very important, I conceive to have some connexion with their religion; the priests alone according to their account having the power of giving effect to them. There are some, indeed, among the people who pretend to possess the secret, probably with a view to make themselves feared, and obtain presents. These charms, which they call kaha, tend to kill by

slow and imperceptible means, any person against whom they are incensed; twenty days is the time allotted to this purpose, and they proceed to work in the following manner: he who wishes to revenge himself by witchcraft, endeavours to procure either the saliva, urine, or excrements of his enemy, and after mixing them with a powder, and putting them into a bag woven in a particular manner, he buries them. The important part of the secret consists in the manner of weaving the bag, and preparing the powder. As soon as the charm is buried, the effects of it begin to appear upon the person against whom it is directed; he becomes sick, and every day weaker, till at last he loses his strength entirely, and dies upon the twentieth day. But should he endeavour to avert the revenge of his enemy, and purchase his life with a hog or any other valuable present, he may be even saved on the nineteenth day; for provided the bag be dug up, the effects of his disease are immediately stopped, he recovers by degrees, and in a few days is perfectly restored. In these charms of the priests, Roberts, who appeared in other respects a sensible man, placed implicit confidence; the same was the case with the Frenchman, who had taken infinite pains to ascertain the secret, in order to get rid of the former, which he had no hopes of doing by any other means; for Roberts possessed a gun, a talisman of infinitely more avail than the kaha. To ensure himself still more against his enemy, Roberts requested both myself and Captain Lisianskoy, in the most pressing terms, to let him have a brace of pistols, a gun, some balls, powder and shot, and we were sorry to be under the necessity of refusing the request of a man, who had been so very useful to us; but we assured him that a constant state of warfare, in which he would live until his stock of powder and ball

were expended, would be the inevitable consequence of our compliance; for the possession of powder and shot could not be a secret upon the island, and the natives would infallibly strive to get them from him, and in all probability he would run a much greater risk of losing his life by having them, than acquire safety by their possession. Our reasons appeared to convince him, and as we parted good friends, we provided him with several articles, likely to be of much more advantage to him than the powder and ball.

Roberts, although he appeared to me to be an enthusiast, and of no settled character, was a man of strong understanding, and I really believe a good man. The worst that his bitter enemy the Frenchman could say against him, was, that he evinced no skill in stealing, and therefore was in constant danger of dying of hunger. He had, however, by degrees acquired that esteem from the savages, which reason must obtain from stupidity, and he had more influence over them, than any of their most distinguished warriors. To the king he had become particularly necessary, and I have no doubt that he would effect more good than the missionary Crook, who remained for some time upon this island, was able to perform; for the latter had no other idea than that of converting the Nukahiwiers to Christianity, without recollecting that it was first necessary to make them men: for this purpose Roberts appears to me more proper, as well on account of the example he afforded, and of his activity, as the esteem which they universally bore him, than either Crook or any other missionary whatever. He has built a very neat house and possesses a piece of land, which he cultivates with care and diligence; and he never fails, where it can

be done, of introducing improvements before unknown to them. From his own account he leads a happy independent life, and is only troubled by the thoughts of being surrounded by cannibals, for which reason he is particularly fearful of the next war. I offered to convey him to the Sandwich islands, from whence he would easily find an opportunity of getting to China; but he could not prevail on himself to quit his wife, who during our stay there bore him a son, and it is probable he will end his days in Nukahiwa.

From a people sunk into the depraved state in which the Nukahiwars are, any great feeling for music can scarcely be expected. But as there is no nation, however unpolished, among whom some delight in harmony has not been observed, that of Nukahiwa is not totally indifferent to it. Their music answers to their character; and the real object of this art, which is to raise soft sensations, cannot be obtained among a people devoid of feeling, nor can those men have any taste for the soft and delicate tones of a flute, who murder their wives and children with the greatest indifference. Such instruments alone can procure their approbation, and continue in use, as rouse their passions, whenever nature attempts to assume a sway; and for this purpose their drums, which are of an enormous size and produce a dull hollow noise, seem particularly calculated. Another sound which they produce by pressing one arm close to their bodies, and striking forcibly with the other on the hollow part, so as to make a sharp and sudden noise, appears to afford particular pleasure to the ear of the Nukahiwier. Their singing and dancing are no less wild: their dancing consists in hopping for a considerable time on the same spot, frequently

raising their hands in the air, and moving their fingers with great velocity, while they beat time with their hands, in the manner above described. Their singing is more like howling, than any regular concordant sound; yet they were satisfied with it, and I much doubt whether any Nukahiwier would be affected by the most beautiful music.

The information I have to give with regard to the population of the island, is drawn certainly from a very arbitrary estimation. But where no positive account can be adduced, any thing even approaching the truth becomes of value. Tayo Hoae, according to Roberts, can send 800 warriors against its enemies; Home 1000; Schegua 500; Mauday has 1200 under his command; Hotty-Schewa to the south-west of Tayo Hoae, and another valley to the north-east, have each 1200. These numbers Roberts mentioned at random, having no positive information on the subject, but believing, he said, that they were rather below than above the mark. The warriors therefore amount to 5,900; and if I take three times that number for the women, children and old people, which I think is not too little, considering that the marriages are very unproductive, and I neither saw in Tayo Hoae, nor in Schegua any very old people, I make the whole amount of the population to be 17,700, or in round numbers 18,000. Roberts's calculation, however, of the people of Tayo Hoae, appeared to me by one-third too great; for in this place, where he said there were 800 warriors, and consequently 2,400 people, I never saw altogether more than from 800 to 1000, of whom 3 or 400 were girls. The greatest part of the inhabitants were undoubtedly assembled on the beach, at the time of our landing; for as European

ships rarely touch here, and the eagerness after iron is so very great, it is natural to suppose, that excepting the mothers with their children, of which we only saw the king's granddaughter, very few would abstain from coming there. Taking Roberts's calculation as one-third too great, and reducing the whole population in that proportion, there only remains 12,000; a number undoubtedly very small for an island upwards of sixty miles in circumference, particularly as the climate is healthy, the use of kava very moderate, and the venereal poison has not yet been introduced. On the other hand the constant wars, human sacrifices and murders, which are committed as soon as any want of provisions ensues; the shocking depravity of the women, who give themselves up from the age of eight or nine, and the little regard that is paid to connubial vows, must all tend to diminish the population. Roberts assured me that a woman seldom had more than two children, and very often none at all; on an average therefore, only one child can be calculated for every married couple, which is scarcely a fourth part of what is supposed in Europe.

I shall conclude this account of the manners and customs of these islanders, with some general remarks upon their character; and I must confess that had I not met with the Englishman and Frenchman here, I should have quitted Nukahiva with a most favorable opinion of them. In their intercourse with us they always shewed the best possible disposition, and in bartering an extraordinary degree of honesty: always delivering their cocoa-nuts before they received the piece of iron that was to be paid for them. At all times they appeared ready to assist in cutting wood and filling water; and the help they afforded us

in the performance of these laborious tasks was by no means trifling. Theft, the crime so common to all the islanders of this ocean, we very seldom met with among them; they always appeared cheerful and happy, and the greatest good humour was depicted in their countenances. In a word, during the ten days we spent with them, we were not once obliged to fire a loaded musket at them. Their peaceable behaviour might indeed be attributed to their fear of our firearms; but what right have we to ascribe to any bad motive that conduct which demanded our approbation, or to expect such motives among a nation hitherto but little acquainted with Europeans, and, therefore, according to the doctrines of some philosophers, still perfectly untainted?

That in spite of the prejudices I had formed in Europe in favor of these islanders, I should not have preserved that good opinion of the Nukahiwers, which, from appearances, I had been led to entertain, during the first days of my stay among them; but on the contrary, should have represented them in the most unfavorable light, will certainly appear just, on a due and impartial judgment of the following account.

The two Europeans whom we found here, and who had both resided with them for several years, agreed in their assertions, that the natives of Nukahiwa were a cruel intractable people, and, without even the exception of the female sex, very much addicted to cannibalism; that the appearance of content and good humour, with which they had so much deceived us, was not their true character; and that nothing but the fear of punishment, and the hopes of reward, deterred them from giving a

loose to their savage passions. These Europeans described, as eye-witnesses, the barbarous scenes that are acted, particularly in times of war; the desperate rage with which they fall upon their victims; immediately tear off their head, and sip their blood out of the skull,* with the most disgusting greediness, completing in this manner their horrible repast.

For a long time I would not give credit to these accounts, considering them as exaggerated; but they rest upon the authority of two different persons, who had not only been witnesses for several years to these atrocities, but had also borne a share in them; of two persons who lived in a state of mortal enmity, and took particular pains by their mutual recriminations to obtain with us credit for themselves, but yet on this point never contradicted each other. The very fact of Roberts doing his enemy the justice to allow, that he never devoured his prey, but always exchanged it for hogs, gives the circumstance a great degree of probability; and these reports concur with several appearances we remarked during our stay here; skulls being brought us every day for sale. Their weapons are invariably adorned with human hair, and human bones are used as ornaments in almost all their household furniture:—circumstances which leave, unfortunately, no doubt of the inhabitants of Nukahiva being cannibals. They devour their enemies taken in battle, in common with the New Zealander, the people of the Sandwich islands, in short, with all the islanders of the south sea; but the following trait, which is horribly disgusting,

* All the skulls which we purchased of them, had a hole perforated through one end of them for this purpose.

and yet, from the relation of the two Europeans, is placed beyond a doubt, distinguishes the natives of these islands from all other cannibals, and is perhaps a singular example among the numerous tribes of savages who inhabit the many islands on the north-west coast of this great ocean.

In times of famine the men butcher their wives and children, and their aged parents; they bake and stew their flesh, and devour it with the greatest satisfaction. Even the tender looking female, whose eyes beam nothing but beauty, will join, if permitted, in this horrid repast. Can such people then be defended? Can any one join with George Forster in asserting that the islanders of the south sea are a good natured, mild, and uncontaminated people? Fear alone prevents their murdering and devouring every stranger who arrives. As a proof of this, I need only relate, that some years ago an American merchant-ship put into Port Anna Maria, and the captain, who was a Quaker, suffered his people to go on shore unarmed; but the natives no sooner perceived their defenceless condition, than they assembled in order to attack and drag them into the mountains. Roberts succeeded, with the greatest difficulty, and with the assistance of the king, to whom he represented the treachery of their conduct, and the consequences it would infallibly bring upon the whole island, in rescuing them out of the hands of these cannibals. Nor did we ourselves want a proof of their being denied every feeling of justice and goodness; for although, during our stay, no one had ever shewn them the least illwill, but, on the contrary, every possible kindness, in order to inspire them with benevolence, if not with gratitude, our conduct seemed to have quite a different effect upon them.

A report had spread that one of our ships had struck, occasioned by our being obliged, while in the act of sailing out, to bring up close to the shore as I have related in the seventh chapter. In less than two hours a number of the islanders had assembled on the beach close to the ship, all armed with clubs, axes, and spears. What then could be their intention but to plunder and murder us? The Frenchman too, who came on board at that moment, acquainted us with the hostile intentions of the inhabitants, and of the whole valley's being in an uproar.

From this description of the Nukahiwier, which perhaps may appear exaggerated, but really is not so, it is pretty evident that they have neither social institutions, religion, nor humane feelings in any degree whatever,—in a word, that no traces of good qualities are to be found among them; that they undoubtedly belong to the very worst of mankind, and at any rate that no one can quarrel with me for calling them savages.* Notwithstanding the favourable account in Captain Cook's voyages of the Friendly, the Society, and the Sandwich islands, and the enthusiasm with which Forster undertakes their defence against all those who should make use of any harsh expression with regard to them; I cannot refrain from declaring the inhabitants of all the islands of this ocean to be savages, not only accord-

* Fleurieu gives the following definition of a savage: Voyage de Marchand, tom. 7, page 441, edit. en 8vo. 'J'appelle sauvages les peuples qui ne reconnoissent aucun gouvernement, aucune institution sociale, et satisfaits de pourvoir aux premiers besoins de la nature, peuvent être considérés comme le terme intermédiaire entre la brute et l'homme; on doit cependant classer au-dessous de la brute l'homme qui mange son semblable.'

ing to Fleurieu's definition, but as ranking generally, perhaps with a very trifling exception, with those men who are still one degree below the brute creation. In a word, they are all cannibals: we need only recollect the islanders who have already been proved to belong to this class:—for instance the New Zealander, the cruel inhabitant of the Fidji, the Navigator, the Mendoza, Washington, the Solomon, and Sandwich islands, the islands of Louisiade and New Caledonia. The good name which the inhabitants of the Friendly islands had acquired has suffered very much by the affair of Captain Bligh and the visit of Dentrecasteaux, and it may now be maintained, with some degree of certainty, that they have in this respect the same taste as their neighbours in the Fidji islands and the Isles des Navigateurs.

Hitherto the natives of the Society islands alone, among all those who are pretty well known, have not fallen into suspicion. They are in every respect the mildest, the most uncontaminated and humane of all the inhabitants of this vast ocean. They, in fact, excited the great enthusiasm in favour of these children of nature; but even there the mother murders her newly-born infant with a horrid indifference, that she may abandon herself the more easily to a disorderly life; and the numerous companies of Arreoyes, defended by Forster with so much eloquence, do they not consist of men guilty of the greatest debauchery, and who may all be called parricides? The passage to cannibalism is very easy: and perhaps nothing but the extraordinary fruitfulness of their islands has hitherto preserved them from sinking below the brute.*

* The elder Forster thinks that even the inhabitants of the Society islands were once cannibals.

However much it is to the honour of Cook and his companions that they endeavour to shield the islanders whom they visited, and who did not fall into suspicion, against the charge of being cannibals, later voyages have proved how easily appearances may lead to an erroneous opinion. I will merely adduce the following example, and undoubtedly every future voyage and farther acquaintance with these children of nature will afford many similar ones. Cook met with the kindest reception from the natives of new Caledonia, and he not only exempts them from the suspicion of being cannibals, but has spoken in the highest terms of them. He praises them indeed so highly as to prefer them to all the other inhabitants of this ocean, and represents them as much milder than the people of the Friendly islands. Forster gives an equally favourable account of them ; while on the other hand Dentrecasteaux found among them the most indisputable proofs of cannibalism ; and woe to the navigator whose ship is lost upon this dangerous coast ! Perhaps it was among these barbarians that the unfortunate La Perouse found his grave, after first deploring the loss of his companions suffering by a similar fate.

CHAPTER X.

DEPARTURE FROM THE WASHINGTON ISLANDS.—ARRIVAL
OF THE NADESHDA IN KAMTSCHATKA.

The Nadeshda and Neva sail from the Sandwich Islands—Fruitless Search for the Island Owika Potto—Arrival off the Coast of Owaihi—Remarkable Error in the Chronometers of both Ships—Total want of Provisions—Mowua Roa—Description of the Inhabitants of the Sandwich Islands—The Nadeshda separates from the Neva and sails for Kamtschatka—Experiments on the Temperature of the Sea—Fruitless Endeavours to find the Land discovered by the Spaniards to the East of Japan—Arrival off the Coast of Kamtschatka—Situation of Shipunskoy Nosse—The Nadeshda enters the Harbour of St. Peter and St. Paul.

ON the 18th May we set sail, in very bad weather, from the bay of Tayo Hoae. Upon this occasion we lost a kedge anchor and cable; for, while we were warping out of the bay, a violent gust of wind arose and obliged us to cut our cable and make sail in order not to be driven on the rocks at the west point of the entrance, from which we were scarcely a cable's length. About nine the clouds broke and the weather cleared up; but the wind still blew strong at E. S. E., and we now caught sight of the Neva, who had succeeded in getting to sea the preceding evening. After hoisting in the boats, and stowing away the anchors, I again pointed the ship's head to the northward, as we had still some angles to measure, and the bad weather during the morning had prevented us from finishing our draught of the headlands. At noon we had an observation in $8^{\circ} 59' 46''$; the north-west point of Nukahiwa bearing at

the time nearly N. This, the longitude of which we found to be $139^{\circ} 49' 00''$ W. I made my point of departure.

I now steered W. S. W. with a strong easterly wind, to ascertain the existence of the land seen by Marchand to the northward on his passage from these islands, and which Fleurieu believes to have been the Ohiwa Potto of the Otaheitean Tupaya, who accompanied Cook upon his first voyage. The night was clear; but I determined to lie-to in order to leave no doubt with respect to this supposed island, and did so about nine o'clock, after having run about one degree to the westward of our point of departure. About half past five in the morning we steered, under all sail, W. by S. and at noon W., till I conceived it useless to hold a W. S. W. course any longer; for if Marchand had really seen any land in this direction, we must have discovered it before sunset. After running to the westward until near six o'clock in the evening, without observing any symptoms of land, I gave up all farther search in that direction; nor would it have been prudent to have continued it any longer, as the strong westerly current in this part of the ocean, renders the passage from the Washington to the Sandwich islands very difficult, as was experienced by Lieutenant Hergest on board the *Dædalus*: and it was this current which obliged Vancouver, in his passage from Otaheite to Owaihi, to stand so much to the eastward, in order to fetch the latter island. About six I altered my course N. N. W.: we were at that time in latitude $9^{\circ} 23'$ S., and longitude $142^{\circ} 27'$, consequently $2^{\circ} 48'$ to the westward of Nukahiwa. During the first night we held this course, I kept under very easy sail; because in this vicinity we might have fallen in with land, a piece of good fortune we

did not however experience. During the first days we had a strong wind at E. and E. S. E. with violent squalls, that split some of our sails; the current, as I expected, setting constantly to the westward. Vancouver observed that it sometimes set to the northward; and I was not a little surprised to find it flow two days following to the south, and on the 21st and 22d of this month, between the fourth and sixth degree of latitude, forty-nine miles in the direction of S. W. 65° . This induced me to steer another point to the N., and even N. by W.: the southerly current in the mean time disappeared, and until our arrival at the Sandwich islands it was constantly N. W.

On the 22d May we were in latitude $3^{\circ} 27'$ S. and longitude $145^{\circ} 00'$ W. The southern dip of the needle was on this day 13° , and the variation $5^{\circ} 18'$ E.* On the 24th during a calm, Dr. Horner lowered Six's thermometer a hundred fathoms. At this depth the temperature was $12\frac{1}{4}^{\circ}$, and on the surface $22\frac{1}{4}^{\circ}$ which was also that of the air. Hales's machine, on the contrary, stood at the same depth at 19° , although it was twenty minutes under water; a proof that the water in it had become considerably warmer during the operation of hoisting it on board.

At the time when these experiments were made we were $56'$ S. of the equator, and in longitude $146^{\circ} 16'$; the variation of the needle was $4^{\circ} 34'$ E. and its southern dip $8^{\circ} 30'$. Although,

* This evening we caught a grey bird, about the size of a pigeon; for some time it continued fluttering around the ship, and at length settled on the rigging, and was taken by one of the men.

during the last two days, the wind had been very moderate and even calm, we found the air much pleasanter; and, compared with the hot weather we had experienced for several weeks, and particularly during the night, it might really be considered cool: the thermometer, however, stood only $1\frac{1}{2}^{\circ}$ lower than during the first days of our departure from Nukahiwa.

On Friday the 25th May, about three o'clock in the afternoon, we crossed the equator in longitude $146^{\circ} 31'$, according to the watches, but by the ship's reckoning in $144^{\circ} 56'$. In seven days therefore our longitude by the log had varied from the real longitude about $1^{\circ} 35'$. Nearly at the moment of the ship's crossing the equator, which we were able to determine with sufficient correctness, our latitude, by observation at noon, being only $4'$ S., the southern dip was found to be $6^{\circ} 15'$; but as our dipping needle was not remarkably good, no great dependence can be placed on this calculation. On the next day in latitude $1^{\circ} 12'$ N.* and longitude $146^{\circ} 46'$, it was $5^{\circ} 30'$, and the variation of the needle, some hours later, $5^{\circ} 18'$ E.

Hitherto we had scarcely seen any birds, but on the 27th May, in latitude $2^{\circ} 10'$, and longitude $146^{\circ} 50'$, we saw a flight of tropic birds, and others of a smaller kind: among them there was a larger bird, whose plumage was entirely black, which, according to the report of our wild Frenchman, are in great plenty in the neighbourhood of Nukahiwa and the rest of that group of islands, and are there said never to fly far from land.

* From this time our latitude will always be N. until our departure for Europe from China.

This proof of the vicinity of land, and a large green bough seen by some of our people, raised a hope that we might, even during the night, fall in with some unknown islands; but though the moon shone very bright our wishes were not gratified.

On the 30th May, Johann Neuland, our cook, whose illness I have already mentioned, died. I hoped to have been able to keep him alive until we reached Kamtschatka; but the extreme heat of the weather, while we lay at Nukahiwa, hastened his death. He was a native of Courland, about thirty-five years old, and a man of very good character.

We had frequent calms until we reached the eighth degree of latitude, with very variable winds, and on one day it blew for sixteen hours from the W. The weather was hazy with heavy rain, which at least afforded us the advantage of being able to fill all our empty casks. In the eighth degree the wind veered to N. E. and E. N. E., the true trade wind, and held in that direction until we came off the Sandwich islands. Hitherto our lunar observations had given the same longitude, within a few minutes, as our time-pieces; but on the 3d June we found a difference in our observations of 10', and the next day of 25', by which the watches were too much E. Although the observations taken by Dr. Horner, Captain Lisianskoy and myself agreed pretty nearly with one another, we were nevertheless inclined to attribute this sudden and unaccountable change rather to our distances, than to the time-pieces, but in this we were wrong; for upon our arrival at Owaihi, No. 128. was 33' 30", and No. 1856 11' 00" too much to the eastward.

The wind continued fresh from N. E. and N. E. by E. and a heavy swell from the N. E. occasioned a very unpleasant motion to the ship, which now, for the first time, appeared to have sprung a leak; so large a one, indeed, that we were frequently obliged to work at the pump two and three times a day. It was not, however, dangerous, and was owing to the ship being considerably lighter than when we left Europe, and consequently much higher out of the water. The oakum with which the seams were caulked on the waterstreak was become quite rotten; and the water forced a passage in on the least motion of the ship. This evil could not be remedied until our arrival at Kamtschatka, and I only lamented that the extreme heat should render the operation of pumping so very fatiguing to our people.

At six o'clock on Thursday morning, the 7th June, I conceived myself to be only a very short distance from the east end of Owaihi, and therefore altered my course from N. N. W. to N. W. by W. At half past eight we saw land, and immediately perceived it to be Owaihi, distant about thirty-six miles, bearing N. W.; yet we could not distinguish Mowna Roa. At noon we were in lat. $19^{\circ} 10'$. The east point of Owaihi, in lat. $19^{\circ} 34'$, bore nearly due N. As this point has been very correctly laid down according to the observations of Captain Cook, and is admitted as the true longitude by his disciple and follower Vancouver, we had a very favourable opportunity of ascertaining the error of our watches.

The longitude of the east point was

By No. 128		$154^{\circ} 22' 30''$ W.
1856		$154^{\circ} 45' 00''$ W.

DEPARTURE FROM THE WASHINGTON ISLANDS. 191

Pennington's	154° 29' 30" W.
Captain Cook	154° 56' 00" W.

The observations taken by Captains Cook and Vancouver leave no doubt with regard to the true longitude, and our lunar observations on the 4th and on the 11th June, the day after we quitted Owaihi, perfectly confirmed them. The first made the error of No. 128 to be 39', and the latter 35' too much to the east. We could now only correct the longitude of our watches by this new discovered difference; and assume a new rate for them in the best manner we are able at sea. It is very remarkable that the error in all the six watches on board both the ships, and four of which were by Arnold, should in this short run have happened on the same side. The cooler temperature of the air could hardly have produced this alteration in their rate, as the difference since we sailed was not two degrees and a half. The longitude by the ship's reckoning was 150° 54', and in the space of twenty-one days the current had carried us 4° 2' to the westward, on an average, about eleven miles a day.

The almost total want of animal stock on the island of Nukahiwa, where we had been able to procure only seven hogs of about 70 or 80 lbs. weight, for both ships, made it my duty to proceed to the Sandwich islands, where I reckoned with some degree of certainty, upon procuring a plentiful supply of provisions. My people were all healthy: but in a long voyage like this, during which, except the first weeks after our departure from Brazil, they had had no other provisions than salt meat, I naturally expected from day to day to see some symp-

toms of scurvy break out among them, in spite of all my precautions. As we should be obliged to remain at least a month in Kamtschatka, it was necessary to hasten our voyage thither, in order to arrive at Nangasaky before the end of the month of September, as a change in the monsoon very frequently takes place off the coast of Japan about the middle of that month. But I had the health of my people to preserve, which with me was above all other consideration; and I now abandoned my proposed plan of holding a new course from the Washington islands to Kamtschatka, in the hopes of making some new discovery; and determined, in order to lose as little time as possible, not to come to an anchor anywhere, but merely to bring-to for a couple of days off the coast of Owaihi, from whence, according to the account of all navigators who have touched at this island, the natives will come out fifteen or eighteen miles to sea, to barter their provisions against European goods. For this reason we first stood in for the S. E. coast of Owaihi, hoping, by sailing quite round the island, to obtain a greater supply. It will soon appear how cruelly we were deceived in our calculations.

After standing-in to about six miles from the shore, I put the ship about, and steered along the coast under nothing but our topsails, heaving-to as soon as we saw any canoes put off to us. Their cargoes, however, did not in the least answer my expectations. Some potatoes, half a dozen cocoa nuts, and a small sucking pig, were all that I was able to procure out of six canoes; and these we did not obtain without difficulty, and at a very high price, as the venders would take nothing but cloth in payment, and I had not a yard on board to dispose of.

Stuffs, of the manufacture of the island, they had in abundance for sale; but as my wish was to procure provisions, I forbade any one from buying them. An old man brought us quite a young girl, probably his daughter, whom I conceived, perhaps incorrectly, from her awkward behaviour, and, at least, apparent modesty, to be still innocent; but he had the mortification which he so richly deserved, of offering his goods in vain.

The weather was unsteady, and accompanied by rain and some gusts of wind, and no more canoes putting off from the shore, I stood away from the island, steering S. S. E. with a fresh easterly wind. The scarcity of provisions experienced here surprised me, as the part of Owaihi where we touched seemed to be uncommonly well cultivated. The island had a beautiful appearance; in this respect none of the Washington islands is at all to be compared with it. The whole shore was covered with cocoa trees; and the number of houses and plantations, and of canoes that we distinguished very plainly upon the beach, seemed to indicate a great population. From the east end where the land is flat, it rises gradually to the foot of the mountain Mowna Roa, which, according to Dr. Horner's admeasurement, was 2254 toises high, consequently 350 toises more than the Pik of Teneriffe. It is in its form the most extraordinary mountain in the world; and may be reckoned among the highest: it is properly called a Table Mountain; for the summit, which at this time of the year is quite free from snow, forms a perfect flat, saving an almost imperceptible height on the east side. Upon the first day of our arrival it was only clear for a few moments of the clouds that enveloped it during the greatest part of the day; but in

the course of the next two days we had frequent opportunities of admiring this astonishing mass, whose summit occupies a space of 13,000 feet. We had not once a perfect view of the whole mountain; nor can this happen but very seldom; for when the upper part of it was free from mist, the center was surrounded by clouds that appeared never to separate, and seemed to be suspended from the majestic summit which rose above them. In the morning, when the air is still clear and free from mist, you have the best view of this mountain.

From what we were able to judge by the few natives who came on board, they are not of the handsomest, compared with the people of Nukahiwa. They are shorter and ill-proportioned, their colour is much darker, and their bodies are scarcely tattooed at all. Among those who came off to us there was hardly one whose skin was not scarred, either in consequence of the venereal disease or of the use of the kava; though among the lower or poorer classes, these marks could not arise from the latter cause. Decided as the advantage appeared to be in favour of the Nukahiwian in a physical point of view, the native of Owaihi seemed equally superior to his more southern neighbour in mental acquirements. A constant intercourse with Europeans, particularly Englishmen, of whom there are several in the island, may have contributed not a little to produce this effect. Cheerfulness, activity, and a lively quick eye, we perceived more or less in all whom we had on this day any occasion to treat with. The construction of their canoes was decidedly superior to that of the people of Nukahiwa, and they manage them with a skill in which the latter, to whom the sea does not at all appear a natural element, are very far behind

them. From the specimens given in Captain Cook's voyages, of several words of the language spoken in these two groups of islands, it should seem that the natives ought perfectly to comprehend each other, as many of the words bear the closest affinity; our wild Frenchman, however, could not make himself understood, nor interpret the least thing for us: a few English words, which these islanders pronounced with tolerable correctness, assisted us greatly in our intercourse with them, and enabled us in some degree to understand them. The difference in the pronunciation of the people of Owaihi may perhaps be the reason of their not comprehending the Frenchman. On the whole, he formed so ill an opinion of the inhabitants of these islands, that he repented of his determination to remain here, and begged I would suffer him to continue on board. Although I had great reason to feel offended at, and even to resent his conduct to us at Nukahiwa, I acceded to his request; easily foreseeing that he would play a still more pitiful part here, than he had done in the former island.

At day-break the next morning, I steered for the southern point of Owaihi, where, by Cook's account, there is a large village, from which a great quantity of provisions were brought to him; and I hoped at this place, as well as along the whole coast, to be able to procure an abundant supply, with tolerable facility. At about eleven we weathered this point, which is rendered conspicuous by a low broken rock, and by being surrounded with a reef about a hundred fathoms from the shore, over which the sea broke with great violence. By Cook's observations this point is in latitude $18^{\circ} 53'$, and longitude $155^{\circ} 45'$. At noon it bore S. E. 78° distant, at the most, about

three miles. Dr. Horner and Lieutenant Löwenstern took an observation of the latitude, and found it $18^{\circ} 54' 45''$ N. agreeing very nearly with that of Captain Cook. With regard to the longitude, we found the error of our watches to be one minute less than it was the day before. As soon as we perceived the above mentioned village we lay-by, and, as the wind was fresh, at a distance of not more than two miles from the shore. After waiting two hours three canoes came off to us: in the first was a large hog that certainly did not weigh less than a hundred pounds, and occasioned us no small satisfaction. I already destined it for a Sunday dinner for my crew, and my mortification was therefore the greater, at not being able to purchase even this, the only one which was brought on board. I offered them every thing I had to dispose of; the best hatchets, knives and scissars, whole pieces of stuff, and a complete suit of clothes were refused; the possessor demanding a large cloth mantle capable of covering him from head to foot, and with which we had not the means of supplying him. From one of the other canoes I purchased a small sucking pig, the only article in the way of provisions, that I procured from these three canoes. A very immodest dressed up girl, who spoke a little English, experienced the same fate, as the one who had been brought to us the day before. This day's barter, which turned out much worse than I could have calculated upon, convinced me that no provisions were to be procured without cloth, an article which they demanded for the least thing, even in Karakakua; and perhaps there less importunately than in this place, as luxury must naturally be carried to a higher pitch at the residence of the well known Tamahama, the king of Owaihi. What an astonishing change must have taken place in the circumstances of the

natives of this island, in the short space of ten or twelve years! Tianna,* whom Meares in 1789 carried with him to China, never inquired during his stay at Canton, the price of any wares otherwise than by asking, How much iron do you give for this? So greatly was he impressed, even after a year's intercourse with Europeans, with the value of iron. At present the natives of Owaihi appeared almost to despise this metal, and they scarcely deigned to look upon even the most necessary tools. Nothing would satisfy them that did not flatter their vanity.

As we perceived no other boats putting off to us, I steered under very easy sail along the south-west side of the island until six o'clock, and then south, in order to keep away from the land during the night. Although I had but very little hopes of procuring provisions, I resolved not to give over my endeavours until I had tried upon the west coast, and in the vicinity of Karakakua. About one o'clock, therefore, the next morning, I put the ship about to the northward, and towards half past four Mowna Roa bore N. N. E. and the south point of Owaihi N. E. by E. A thick mist however covered the whole and prevented our seeing the rest of the island, the distance of which was certainly not ten miles. About eight the wind veered to the northward, and was so moderate that even had it been fair, we should have had but little prospect of fetching Karakakua. This unfortunate circumstance, and the uncertainty whether we should even there succeed according to our wishes, made me determine upon losing no more time,

* A chief of the island Atuai.

and on quitting the coast immediately for Kamtschatka, where we should arrive without fail about the middle of July. However, before I made known this determination, I directed Dr. Espenberg carefully to examine the whole crew, and he did not find the least symptom of scurvy upon any one of them. Had he perceived any marks of this complaint, I should infallibly have gone to Karakakua, even if it had occasioned us the loss of a week, a space of time which in our actual circumstances was of the greatest importance to us; for I had bound myself, upon changing the plan of our voyage, to get to Nangasaky this same year; and after the north-east monsoon should set in, I conceived I could not do this without difficulty. I acquainted my officers with my resolution to quit Owaihi, and my motive for so doing. Although they had all rejoiced at the prospect of our stay at Karakakua, and were naturally anxious to obtain fresh provisions, no other kind having come to our table during three months, than what were cooked for the ship's company; they appeared to be all perfectly satisfied with my determination. Captain Lisianskoy, whose time was not of equal consequence to him, resolved, on the other hand, to run into Karakakua bay for a few days, and then continue his voyage to Kodiak.

About six in the evening the southernmost point of Owaihi bore N. E. 87° : the east side of Mowna Roa N. E. 52° . These I made my point of departure, which by Vancouver's chart was latitude $18^{\circ} 58'$ and longitude $156^{\circ} 20'$. About half past seven we parted from the Neva, with a fresh east wind that had sprung up after some hours calm; I steered south-west, as it was my intention to sail in the parallel of 17° to the 180th degree

of longitude, which I was induced to do for two reasons: first, because in the parallels of 16° and 17° the trade winds are fresher than in the 20th or 21st degree; and secondly, because this course would lie nearly in the middle between that pursued by Captain Clerke in 1779, and the course steered by all merchant ships in their passage from the Sandwich islands to China;* and this gave us a chance of making some new discovery.

On the 11th June at noon, we were in $17^{\circ} 59' 40''$ N. and $158^{\circ} 00' 30''$ W. By observation we found that the current had carried us, since eight o'clock the preceding evening, fifteen miles to the north, and eight to the westward. The two following days, it continued to impel us at the same rate, and in the same direction; until we reached the latitude of $16^{\circ} 50'$, and longitude of $166^{\circ} 16'$, when it ran to the north-east. Two sets of lunar observations on the 11th, reduced to noon, gave for our longitude $157^{\circ} 58'$: by No. 128 it was $158^{\circ} 00'$. Dr. Horner's observations agreed very nearly with mine, a fresh proof that the longitude of the different points of Owaihi is very correctly determined, and consequently that the new rate assigned to our watches was right. But as some trifling difference had taken place between them, we altered it a little, assigning again to No. 128 the rate of its going at St. Catherine's, namely $-24''$; to No. 1856 half a second more $= +27'' 5$; and to Pennington's watch two seconds less, namely

* Captain Clerke followed the parallel of 20° to the longitude of $179^{\circ} 20'$. The merchant ships sailing to China from the Sandwich islands, generally keep in the parallel of 13° until they reach the Marianas.

-15". Although this alteration was merely an approach to the mark, made only upon probable grounds, still we deemed it to be not unnecessary, since for several days, this difference between their rates had been constant. The fine weather and the clear atmosphere enabled us on the six following days, from the 12th to the 18th June, to make daily calculations of our longitude, by means of lunar observations. The result of these, which took place under the most favorable circumstances, was, that during the four first days the watches had in the mean given the longitude 4' 49" too much to the east, while those of the two last days showed that they were 6' 11" too much west. The greatest difference during these seven days' observations, did not amount to five minutes in those which were too much eastward, and in the westerly ones only two minutes: Dr. Horner's observations agreed in the same proportion. This error was too trifling to inspire mistrust against the rate assumed for the watches, at the Sandwich islands; and, indeed, the greatest difference between the three watches, had hitherto been but two seconds of time; later observations certainly made the difference much more considerable, and this could not but be expected, as the temperature of the air experienced a greater change. The mean of all our observations by No. 128, reduced back to the southern extremity of Owaihi, made its longitude $155^{\circ} 19' 16''$ W.: its true longitude, according to the frequent observations of Captains Cook, King, and Vancouver, is $155^{\circ} 17' 30''$.

On the 15th June we saw in latitude 17° and longitude $169^{\circ} 30'$, an extraordinary number of birds, that hovered round the ship in flocks of upwards of a hundred; this raised

our hopes of meeting with land very considerably ; but although the night was perfectly clear, and we kept a good look out, there was none to be perceived. I cannot however but think, that during the night we must have passed near some island, or rock, standing above the water, that serves as a resting place for these birds ; for we again saw several the next morning, nor did we lose sight of them until noon. La Perouse in 1786, and an English merchantman in 1796, discovered west of the Sandwich islands, the first in the parallel of 22° and the latter in that of 18° , two small rocky islands both extremely dangerous, and it is very probable that many more of this kind might be met with.* Although I did not consider it necessary to offer a reward to those who should first discover land, as the men, the officers, and myself, were all equally anxious on this head ; nevertheless, I doubled that which had hitherto been held out in the hopes of rendering some of them more watchful.

On the 18th June, in latitude $17^{\circ} 30'$ and longitude $176^{\circ} 46'$, I steered a rather more northerly course, and on the 20th in latitude $19^{\circ} 52'$ and longitude $180^{\circ} 00'$ N. W. by N. The same day we crossed the course followed by Captain Clerke, and immediately left it at a distance, as it ran much more to the westward. During the whole passage from the Sandwich islands to Kamtschatka I endeavoured, with pretty tolerable success, not to approach the line in which he kept nearer than by a hundred or a hundred and twenty miles. As we got to the

* The Neva in her passage from America to China in 1803, found near this place a very dangerous sand island in $173^{\circ} 35' 45''$ W. and $26^{\circ} 02' 48''$ N.

northward the wind became more moderate and variable. The weather had hitherto been very fine, the trade wind constantly blowing, with a clear sky, and with a degree of force that carried us never less than seven knots an hour. The sea was perfectly calm, and we met with none of those swells of which Captain King so much complains. The temperature was particularly cool, the quicksilver in the thermometer never rising above 21° ; and, although at this time the meridian altitude of the sun was 83° and 84° , it sometimes fell below 20° . The variation of the needle we had observed to be gradually increasing since our departure from the Sandwich islands, and in the 20th degree of latitude, and longitude 180° , it seemed to have attained its maximum, that is to say $13^{\circ} 20'$ E., for it now began to decrease in nearly a like proportion; and upon our arrival at Kamtschatka was the same as at the Sandwich islands, viz. $4^{\circ} 46'$ E.

As the meridian altitude of the sun on the 22d June would be nearly 90° when the sun is very difficult to observe, Dr. Horner reckoned before hand the true time of noon, and the height thus obtained we admitted as that of the meridian; our latitude, calculated in this manner, agreeing within two minutes of that by the ship's reckoning;—a difference which, for some days past, we had already found between the latitude by our observations and our calculations. On this day we crossed the northern tropic in longitude $181^{\circ} 56'$ W.: a calm now ensued which lasted two days, during which the sea was without the smallest motion, and was, in the true sense of the word, like a mirror, a state in which I have never seen it except in the east. Dr. Horner availed himself of this calm to make some

observations on the temperature of the water. He found that in Six's thermometer the quicksilver fell $13^{\circ} 3'$ at a depth of 125 fathoms; on the surface of the water it stood at $20^{\circ} 5'$ Reaumur, so that a difference took place of $7^{\circ} 2'$; Hales's machine only shewed a difference of $2\frac{1}{2}^{\circ}$. At fifty fathoms Six's thermometer was at $17^{\circ} 3'$, and at twenty-five fathoms $19^{\circ} 7'$; thus in these latitudes the difference in the temperature of the water at a depth of twenty-five fathoms is one degree; at fifty fathoms $3^{\circ} 3'$; and at 125 fathoms $7^{\circ} 2'$ Reaumur.

After this calm we had a pretty fresh wind at E., and a continuance of fine clear weather, until we got into 27° of latitude. This was the boundary of the N. E. trade wind, and from this time we had variable winds, blowing first from the S. E. and S.

On the 28th June we were in latitude $29^{\circ} 3'$, and our longitude, by several sets of lunar observations, was $185^{\circ} 11' W.$ No. 128 made it $186^{\circ} 00'$, so that the westward inclination of this watch had already increased to $49'$. By the next day's observations it was $48' 30''$, by of a mean of all therefore $44' 45''$.

In latitude 30° we had, with thick hazy weather, a very strong westerly wind, accompanied by heavy squalls that tore some of the old sails, which I had not had unbent, thinking them past mending. This weather was followed by another calm, and we availed ourselves of it, to calculate the temperature of the sea, lowering a boat that it might be done with more accuracy.

On the 2d July we were in $34^{\circ} 2' 41''$ and $190^{\circ} 7' 45'' W.$ By

our observations we found that we had been carried by a current thirty-seven miles N. E. by N. in the space of three days. On the 29th June, the last day on which we had observed, the current ran 15' S., a change in its direction which was as welcome to us as it was unexpected. The next day we were in latitude 36°, and by our watches corrected by the last lunar observations in 191° 30' W.

His Excellency Count Romanzow had given me particular instructions, previous to my departure from Russia, to look out for an island, that had been formerly repeatedly sought by the Spaniards and Dutch. As to the first discovery of this land the world is completely in the dark, and it rests upon ancient, perhaps fabulous reports.* The Spaniards, who had heard that an island, very rich in gold and silver, had been discovered to the east of Japan, sent a ship there in 1610 or 1611 from Acapulco with orders to take possession of it. The Dutch were equally allured by the supposed wealth of this land, and sent two ships under the command of Captain Matthias Kwast for the same purpose. But this undertaking did not succeed better than that of the Spaniards.† The attempt made by the celebrated Captain Vries on board the *Castricom* in 1648, and by La Perouse in 1787 to discover this land, proved equally unsuccessful. Of modern navigators La Perouse is indeed the only one who has really made this attempt,

* In the original Japanese charts there are two uninhabited islands surrounded by rocks lying to the east of the bay of Jeddo: perhaps this circumstance may have given rise to the belief of their existence.

† Adelung's *History of the Voyages and Attempts made to discover a North-west Passage to Japan and China*, (in 4to.) p. 477.

since neither Cook, in his voyage from Unalashka to the Sandwich islands, nor Clerke, in proceeding from these islands to Kamtschatka in 1779, nor indeed Dixon, Vancouver or any others have ever renewed it. I do not know any work in which the parallel followed by Captain Kwast in search of this island is mentioned; but it is probably the same in which Vries was directed to look for it, viz. that of $37^{\circ} 30'$ which he followed from the 142d degree of east longitude from Greenwich to the 170th. La Perouse continued in the same parallel from $165^{\circ} 51'$ east longitude of Paris to $179^{\circ} 31'$, one point from $13^{\circ} 41'.$ *

I had very little hopes of being more successful than my fore-runners in my endeavours to find this island, particularly as owing to the bad weather we had not a very extended horizon: I considered it nevertheless as my duty to avail myself of the east wind which blew pretty fresh, to add something to the knowledge of a circumstance that had so long occupied navigators and geographers perhaps to no purpose. As nothing is known of the position of this island, it must be left to every navigator to chuse, in seeking it, any parallel either to the east or west which he may think proper. I had in my own mind determined upon the 36th degree of latitude, and I can only regret that the weather was any thing but favourable to us. At noon I steered west with a strong east wind; towards evening the wind increased, and in the night it blew so hard as to oblige us to strike our top gallant masts and yards, and to close reef our topsails. About six o'clock the next morning the wind abated

* La Perouse's Voyage, English translation in 4to., vol. 2. p. 266.

a little but veered gradually to the south, the weather still being very foggy. This induced me not to continue a westerly course any longer, as no advantage could be expected from this search, while it might prove very detrimental to us. About eight, therefore, I steered N., after having run in twenty hours 34° W. in the parallel of 36° . A little before noon the weather cleared up, and I already repented of having altered my course; but my regrets were not of long continuance, for the change of weather was also accompanied by a change of wind. Towards noon it blew S. W. and shortly after W. S. W. and forced us to steer a northerly course. The constant fogs which prevail in this sea, will always render such an investigation very difficult unless when there is no other object in view, and several months can be spent upon it. From the 30th degree of latitude until our arrival on the coast of Kamtschatka, we were almost constantly in a thick fog that never cleared away but for a very short time. The search for this land would be more likely to prove successful, if pursued from west to east rather than in the contrary direction, as the westerly are the prevailing winds in these latitudes.

On the 5th July at noon we saw a large turtle; I immediately lowered a boat in order to catch it, but our labour was fruitless, as it dived as soon as the boat approached it; at that time we were in latitude $38^{\circ} 32'$ N. and longitude $194^{\circ} 30'$ W. Meares in 1788 saw a turtle in nearly the same place, namely in latitude $38^{\circ} 17'$, and longitude $194^{\circ} 50'$; however, we met none of the proofs of land which he fell in with.* The wind

* Meares's Voyage, original edition in 4to. page 99.

was now very variable, accompanied by thick fogs and rainy weather: on the 7th July we saw in latitude $42^{\circ} 34'$ and longitude $197^{\circ} 00'$, a number of seamews and a large black bird of a species said never to fly far from land; the sea was besides perfectly calm, although the wind which had blown fresh from the south-west had now shifted to the north-east. From this striking calmness of the sea, the vicinity of land might be inferred, but any discovery hereabouts must be the effect of chance, owing to the constant fogs that prevail.

On the 10th July being in latitude $47^{\circ} 20'$, the wind blew so hard during several hours, that we were obliged to double reef our topsails. The next day at noon we were in latitude $49^{\circ} 17'$, and by the timepieces in longitude $199^{\circ} 50'$, consequently a very short distance from land, the vicinity of which several circumstances tended to announce; for we now saw a quantity of birds such as sea-mews, different species of the Greenland diver, wild ducks, a kind of larks of a grey colour with a yellow stripe on their backs, and a large white bird not unlike an albatross.

On the 15th July towards eight o'clock, land was descried from the mast head. It trended away from N. N. W. to W. N. W.; and we conceived its distance about ninety or ninety-five miles. By our latitude and longitude it must have been the land near Cape Poworotnoy, called Cape Gavarea on the English charts. It soon disappeared in the mist, and we did not again see it until eight o'clock the same evening, when we were in nearly the latitude of Poworotnoy, namely, $52^{\circ} 21' N$. A lofty mountain bearing the same name in our chart of this

part of the coast of Kamtschatka, owing to its vicinity to the cape, lay nearly due west of us.

At day-break we saw to the north a high mountainous land, which, from its direction, must have been Shipunskoy-noss; the position of this cape is given very differently, in the best charts of the coast of Kamtschatka. In that of the Russian discoveries, which was only published in St. Petersburg in 1802, Shipunskoy-noss is laid down in $52^{\circ} 56' N.$ and $177^{\circ} 38' E.$ of Ferro, or $200^{\circ} 07' W.$ of Greenwich: by Admiral Sarytscheff's chart it is in $52^{\circ} 02' N.$ and $200^{\circ} 15' W.$: by the chart accompanying Captain Cook's third voyage, in $53^{\circ} 10'$ and $192^{\circ} W.$ Captain King in his description of the coast of Kamtschatka, has given the situation of Shipunskoy-noss, differently in two different places. In the third volume of Cook's third voyage, original edition in 4to, page 310, he states that Shipunskoy-noss lies in $52^{\circ} 21' N.$ and $201^{\circ} 12' W.$ —N. E. by E. $\frac{1}{4}$ E. of Cape Gavarea ninety-six miles; and page 311, that it lies in $52^{\circ} 51' N.$ and $201^{\circ} 12' W.$, E. N. E. $\frac{1}{4}$ E. of the entrance of Awatscha bay, seventy-fives miles distant. By the situation stated in page 310, the latitude of Shipunskoy-noss must be $53^{\circ} 32'$, and its longitude $199^{\circ} 26'$, by the other $53^{\circ} 16' N.$ and $199^{\circ} 15' W.$: in both of which statements an error has probably crept into the press: by our observations Shipunskoy-noss lies in $53^{\circ} 06' N.$ and $200^{\circ} 10' W.$ During the whole day it was quite calm, nor was it not till the evening, that a breeze sprang up from the south, by the help of which we approached the land. Before sunset we saw the five mountains that so clearly distinguish the coast of Kamtschatka, and of which Captain King has given a drawing as correct as his description. It was

DEPARTURE FROM THE WASHINGTON ISLANDS. 209

calm during the whole night; about four o'clock in the morning, however, a fresh breeze sprang up from the westward, and as we approached the land, it gradually veered to south south-east. About eleven *a. m.* we ran into Awatscha bay, and at one anchored in the harbour of St. Peter and St. Paul, after a very good passage of thirty-five days from Owaihi, and five months and a half from Brazil. At this time we had but one invalid, and in a week he became perfectly well.

CHAPTER XI.

STAY AT KAMTSCHATKA AND DEPARTURE FOR JAPAN.

Occupation on board the Ship in the Harbour of St. Peter and St. Paul—Uncertainty with regard to the continuance of our Voyage—Arrival of the Governor from Nischney Kamtschatsk—Determine upon pursuing our Voyage—Change in the Ambassador's Suite—The Nadeshda quits Kamtschatka—Storm in the Parallel of the Kuriles—The Ship springs a considerable Leak—We determine the Non-existence of a few Groups of Islands, that are laid down in some old Charts to the East of Japan—Captain Colnett—Straits of Van Diemen—We see the Coast of Japan—Violent Storm followed by a great Typhon—We approach the Coast of Japan a second time, and sail through the Straits of Van Diemen—Description of these Straits, and of the Islands lying within them—Anchor at the Entrance of the Bay of Nangusaky.

WE did not find the governor of Kamtschatka at the harbour of St. Peter and St. Paul, his usual residence being at Nischney Kamtschatsk, about seven hundred wersts from thence. As his presence was of importance to us, the ambassador immediately dispatched an estafette, with a request that he would come without delay to St. Peter and St. Paul, and bring a company of soldiers with him; but his arrival could not be expected in less than a month. In the mean time, Major Krupskoy, the commandant of Petropawlovsk, did every thing in his power to assist and be of service to us. He gave up an apartment in his house to the ambassador, and issued orders for bread to be baked for our crew, and the ship to be supplied daily with fish; and after a voyage of five months and a half, during which we had been obliged to forego fresh provisions, it

was eaten with an eagerness, those only can form any idea of who have been in a similar situation. The ship was immediately unrigged, and every thing sent on shore, the landing place not being fifty fathoms distant; and after so long a voyage all the sails and rigging required either a thorough repair, or to be replaced with new. All the materials and effects which had been shipped at Cronstadt for Kamtschatka were unloaded; and nothing was left on board but 6000 pud* of iron, which I did not send on shore, fearing it would cost us too much time.

I had the greatest reason to hasten every thing as much as possible, in order to arrive at Nangasaky before the north-east monsoon should set in, and I was anxious to sail from Kamtschatka in a fortnight at the latest; but could I have foreseen that our stay at St. Peter and St. Paul would have exceeded six weeks, and that we should pass the last three of these not only without employment, but quite uncertain about the continuance of our voyage, I should undoubtedly have unshipped the iron, which I was afterwards obliged to cover hastily with ballast. Almost all the presents destined for the Emperor of Japan, particularly the articles made of steel, were sent on shore, as the ambassador was desirous of ascertaining himself the condition in which they were. As we wanted craft to carry our ballast, the commandant made over two old boats to us, that had belonged to Billings's ship the *Slawa Rossii*, and had

* A weight of forty pounds.

been carelessly suffered to sink in the harbour of St. Peter and St. Paul.

On the 12th August the Governor arrived, accompanied by his younger brother, who acted as his adjutant, and by Captain Feodoroff and sixty men, whom he had brought with him at the request of M. de Resanoff,* and it was settled that we should sail in a week after his arrival. The governor was so good as to remain at St. Peter and St. Paul during our stay, in order to afford us any assistance we might need, and we felt the presence of this active and amiable man in an extraordinary degree. A trifling change took place in the suite of our ambassador: Count Tolstoy, lieutenant of his Imperial Majesty's guards, Dr. Brinkin,† the physician to the embassy, and M. Kurlandzoff, who had been engaged as draftsman to the expedition, quitted the ship, and set out from hence to St. Petersburg; and in their stead Captain Feodoroff, of the Kamtschatka battalion, and Lieutenant Koscheleff, the governor's brother, accompanied us as part of the ambassador's suite; and as he had not brought any guard of honour with him from St. Petersburg, he selected eight men here, who were to be left again in Kamtschatka upon our return from Japan. It was likewise settled to leave Kisseleff, a native of Japan,

* When the mode of travelling in Kamtschatka is considered, the difficulties attending the conveyance of 60 soldiers a distance of 700 wersts, in all possible haste, will easily be imagined. The object, however, which required their presence in Petropawlovsk was too important to admit of any difficulties being urged against sending for them.

† Dr. Brinkin died shortly after his arrival in St. Petersburg.

who was to have acted as our interpreter, behind; his conduct during our stay here not having been proper, besides that he was hated by the rest of his countrymen. The ambassador conceived, too, that the Japanese would be extremely incensed upon learning, what they could not fail to observe the first evening of his arrival, that he had embraced the Christian religion; and the wild Frenchman, whom we brought with us from Nukahiwa, was also left at Kamtschatka.

I wished, and Dr. Espenberg agreed with me, to have left the locksmith of the ship behind, his health appearing to us in a dangerous state. He had been pretty well during the whole voyage; but the seeds of consumption were very apparent in him. Its symptoms had increased considerably, owing to his intemperance; and the heat on the passage from Brazil had particularly weakened him. To his excesses on his arrival in Kamtschatka he owed a most dangerous illness that soon after seized him. At the time of our departure for Japan he had, in some measure, recovered, but I was afraid that upon any fresh relaxation his illness would again break out; nor could I be certain whether, in Japan, we should be able to keep a watchful eye upon him. I was desirous, for these reasons, to have sent him back to St. Petersburg; but he declared expressly that he had rather die on board the ship amongst his companions than return by land. As he swore too, most solemnly, never again to indulge in an excessive use of spirituous liquors, I allowed myself to be persuaded to keep him in the ship; and during the rest of our voyage he never once broke his word, and returned to Europe perfectly restored in health.

On the 29th August, the ship was quite ready for sea ; and on the 30th we left the harbour of St. Peter and St. Paul, and anchored in Awatscha bay, about half a mile from the watering place. The next day, the governor and the officers of the garrison dined on board ; and I received him with every mark of honour due to his rank : the more willingly, as this respect was shewn to a man who had so many claims to our esteem, gratitude, and consideration.

Until the 6th September the weather was constantly thick and rainy, with south, south-east, and east winds, which were so variable, that frequently, in the course of an hour, we had the wind from every point of the compass between south and east. Unpleasant as was our stay here, we were in some degree compensated for it, by the arrival of supplies from Nischney Kamtschatsk, whither the governor had sent a serjeant and two Cossacks with six horses, to bring us the stock of provisions which he had laid in for the consumption of his own family during the winter. In doing this, he deprived himself of every thing : for of the provisions destined for us, many sorts could not be replaced ; and the few that were to be procured, could only be met with in small quantities, or of inferior quality. Besides this, he sent to Werchnoy Kamtschatsk, for three oxen belonging to the crown, and two others, his own property ; a present, considering the great scarcity of horned cattle in Kamtschatka, of very considerable value. If the distance of 400 wersts from St. Peter and St. Paul, and of 700 wersts, or 100 German miles, to Nischney Kamtschatsk be considered, and that this space could not, with all possible speed, be travelled in less than twenty days, I do not know which to admire most, his noble generosity or his readi-

ness to serve us. He spared no pains to supply us with every thing in his power to procure, to whatever distance he might have to send for it; nor would he even be deterred, by the uncertainty of our awaiting its arrival, from sending for his own stock of provisions, the conveyance of which was attended with so many difficulties. Owing to the lateness of the season, I wished to proceed upon our voyage to Japan as soon as possible, and we were indebted only to the contrary winds, upon which the governor was so good as to calculate, and the extraordinary haste of his serjeant, Semenoff, who arrived in seventeen days, for the receipt of this supply before our departure.

I doubt whether any ship ever sailed from this harbour so well provisioned as we were; and shall mention the chief articles we were furnished with, in order to shew what Kamtschatka was competent to provide. We had seven large live oxen; a considerable provision of salted and dried fish of a superior quality, such however as can only be procured at Nischney Kamtschatsk; a great supply of vegetables from Werchnoy; several casks of salt fish for the crew, and three large barrels of wild garlic, which, in Kamtschatka, is called *Tscheremscha*, and is, I believe, a perfect antiscorbutic, and a most admirable substitute for sourkraut. The water in which this wild garlic is preserved, and which may be renewed daily, affords a wholesome and not unpleasant beverage. Besides these, we received several delicacies for our own table, such as salted reindeer and game, argali or wild sheep, salted wild geese, &c. for all which we were indebted to the governor who, if I may be allowed the expression, employed all Kamtschatka

to our advantage; for, before his arrival, we had been able to procure nothing but fish.

On the 6th September the wind veered to north-west, and we got under sail; when the governor immediately came on board to wish us a happy voyage. The ship was scarcely under weigh, when the fort saluted us with thirteen guns, which compliment we returned with an equal number. The wind was so moderate, that we scarcely moved forward with the help of the ebb and two boats towing us; and as the flood set in about noon, we were obliged to let go our anchor in seven fathoms water, at the entrance of the strait leading from Awatscha bay into the sea. The wind shifted with the flood to south-east, blowing fresh, with a thick mist and rain. In the afternoon I sent off two officers to sound both the shores of these straits, and found the depths marked in Captain Cook's plan of Awatscha bay perfectly correct: indeed the whole plan of it, as well as the three harbours adjoining, is drawn with an accuracy that cannot be exceeded.

At seven the next morning, a moderate breeze sprang up from the north, and as it increased, we sailed with it through the straits, which we left behind by about nine o'clock. I first of all steered S. E., then S. S. E., and afterwards S. by E., but a heavy swell from the S. E. held us back a little. The wind blew very fresh and continued, as before, foggy, with constant rain. About eleven, the small island Staritschkoff* bore N. W. 80°,

* This name is derived from a species of birds the Russians call Staritschki, which have chosen this island as their residence.

and the eastern promontory, at the entrance of the straits, N. W. 20°. A thick fog soon after concealed the land from us, and about twelve we entirely lost sight of it. At six in the evening Cape Poworotnoy appeared, bearing W. by N. but owing to the thick mist we only saw it for a moment. Throughout the night the wind blew pretty fresh with a heavy swell from the east; and the next morning, though it became more moderate, the waves ran higher than before. The lateness of the season, and the particular object of this voyage allowed me to think of nothing but the means of getting as soon as possible to the south-east coast of Japan: I steered, however, according to my former plan, a course directly in the middle between those of Captains Clerke and Gore. The line of the first we crossed in latitude 36° and longitude 214°, as soon as we began to approach the coast of Japan.

The whole time we lay in the road of St. Peter and St. Paul, we had, as I have already observed, constant drizzling rain with a thick fog; nor did this weather leave us during the first days of our departure. At length the sun, that we had not seen for upwards of ten days, appeared, though only for a few moments, and enabled us to dry our beds and clothing, which were completely soaked. On the morning of the 11th a strong gale sprang up at east, and soon increased to a storm, which attained its height about five in the afternoon. The waves ran extremely high; about midnight the storm abated a little, but it did not cease until the next morning: at noon it again fell calm, and soon after we had a gentle breeze from the north, which increased gradually. We could not at first avail ourselves of it, as, owing to the heavy swell from the eastward, we were

unable to set all our sails. During the last storm the ship had made so much water, that we were obliged to keep the pumps constantly at work, and as she had been carefully caulked during our stay at Kamtschatka, this new leak seemed to be under the copper, which, upon farther examination at Nangasaky, we found to be the case. On this day we saw several whales, and a vast number of land and sea fowls, several of which let themselves down, quite fatigued, upon the ship, and were caught by the men. Captain Gore saw in the parallel of 45° , where we now were, only rather nearer the land, several land birds, a circumstance that led him to suppose the vicinity of the Kurile islands.

The stormy weather that prevailed almost constantly since our departure from Kamtschatka, and particularly on the 11th, and which had rendered an almost continued pumping necessary, obliged us to kill the remaining four of our oxen, as they had suffered so much by the motion of the ship as to leave but little hopes of their recovery.

On the 15th at noon the sun appeared, but only for a few hours. Our latitude by observation was $39^{\circ} 57' 29''$ N. and the longitude by our watches $201^{\circ} 7' 30''$ W. We now began to be aware of a great alteration in the temperature of the atmosphere, the quicksilver, which had hitherto shewn only eight or nine degrees of warmth, rising to fifteen and sixteen degrees. On the 16th, in the evening, we had the first observations for the variation of the compass. Two sets varying from $1^{\circ} 7'$ to $2^{\circ} 30'$, gave as the mean $1^{\circ} 48' 30''$ E. We were then in latitude $38^{\circ} 40'$ and longitude $209^{\circ} 25'$. The motion of the ship

had always been too great to permit our observing the dip of the needle with any degree of accuracy ; and the only observation of this kind that Dr. Horner had been able to make, was in latitude $48^{\circ} 30'$ and $201^{\circ} 40'$, when he found the northern dip to be $59^{\circ} 30'$.

The stormy weather again commenced, and the rain fell incessantly. The wind was from the north-east with a very heavy swell ; and although this favoured our voyage, as we seldom ran less than eight or nine knots, it was so far hard upon us, that with this quick run, and a perfectly favourable wind, the water in the hold constantly increased ten or twelve inches in an hour, while with a side wind we seldom made more than five or six inches ; from which we inferred, that the chief leak must be in the foremost part of the ship.

In the charts accompanying La Perouse's voyage there is a group of four islands without names, of which the northernmost is in latitude 37° and longitude $149^{\circ} 30'$ E. of Paris, or $214^{\circ} 20'$ W. of Greenwich ; and with the name of *Volcano*, an island of tolerable size in latitude 35° and longitude 214° , with some smaller ones lying to the southward of it. In the chart found by Lord Anson on board the Spanish galleon *Nuestra Señora de Cabadango*, and published with some improvements in his voyage, there are two groups bearing the names of *Islas nuevas del Año 1716*, and *Islas del Año 1664*, (the northernmost lies upon this chart in latitude $35^{\circ} 45'$, and 19° E. of S. Bernardino, or longitude $216^{\circ} 30'$ W. of Greenwich, the other in latitude $35^{\circ} 00'$, under the same meridian as the first,) and another island called *Volcano*, well to the southward of these two groups, in latitude

34° 15'; and in latitude 33°, nearly two degrees more to the E. an island bearing the name of *Peña de los picos*, and a rock called *Bayro*. In the existence of these islands Arrowsmith appeared to place no faith, as they are not to be found in any of his charts; the last of those in Anson's chart, is likewise in a new and very good one, prepared by the French geographer Barbié de Bocage for the voyage of Admiral Dentrecaesteaux, written by the naturalist La Billardière. I did not myself much believe in them; for the course held by Captains Gore and King, after quitting the coast of Japan, ran between the northern group and the northernmost Volcano island; and that followed by Captain Colnett, in his passage from China to the north-west coast of America, in the year 1789, ran between the two southernmost, and at such a distance only, that in clear weather both Gore and Colnett must both have seen land. I would not, however, let this opportunity slip of placing their non-existence beyond a doubt; and therefore held such a course as would carry me right through the center of them, as marked in the charts: and I can affirm, that the four northernmost and nameless islands, the northernmost Volcano island, the Islands of the Year 1664, and the southern Volcano island, are not, at least, in the situation assigned to them in the French chart. We sailed at a distance of seventy-five miles from the Islands of 1716, so that I cannot decide any thing with regard to them. On the 18th September, about half past five in the evening, as we were in latitude 36° and longitude 215° 45', we fancied we saw land bearing due west, but were soon convinced of its being clouds, whose forms had led us to mistake them for small islands. As some of the people on board the ship still seemed to be of opinion that what we saw might be

land, I steered until seven o'clock directly towards it; and before it was dark we were all convinced of our mistake, and I again resumed our former course to the south-west.

The clearness of the weather allowed us to take several sets of observations of the distance of the moon from the star Atair. Dr. Horner's observations reduced to eight o'clock, gave $214^{\circ} 03' 30''$ W. mine $213^{\circ} 57' 45''$. N°. 128 at the same moment was $213^{\circ} 55'$. We were very well satisfied with this agreement, which the heavy motion of the ship scarcely allowed us to expect. The next evening's observations, made under more favourable circumstances, shewed a similar agreement, and convinced us of the correctness of our timepieces.

The change of temperature was extremely sudden, the quicksilver was between 19° and 21° , while on our voyage from the Sandwich islands to Kamtschatka it was only 16° and 17° in the same parallel; and even in 30° of latitude, though in the height of summer, it had never risen to 21° . This small degree of heat in the months of June and July was, perhaps, owing to our great distance from the land; or, it might be, that the maximum of summer heat may be later here than in Europe.

Since our departure from Kamtschatka we had had, with very few intervals, a hollow sea, running high from the N. E.; but on the 20th September, when we were in latitude $34^{\circ} 20'$ and longitude $215^{\circ} 29' 45''$, every body was struck with the extraordinary calmness of the sea, although the wind blew fresh from the south-east. We could not therefore quite reject the probability of finding land to the S. E. particularly as on this

day we saw, for the first time, flying fish, a great many porpoises and tropic birds, which seldom are seen so much to the northward, at least at any distance from land. In the variation of the needle there was hardly any alteration; the observations made on this day scarcely differing a degree from those of the 18th and 19th. It appeared to decrease gradually, but the changes were so trifling, that considering the roughness of the sea, they might be ascribed as much to chance as to a regular diminution.

I intended to have looked for the island discovered by the Dutch in the year 1643, and called in the charts '*Zuyder Eyland*, or South Island, well to the southward of Fatsjio; but when we got into the same parallel it blew so hard from E. N. E. with such thick rainy weather, that I was forced to abandon my intention. As Captain Colnett's course ran very near this island, it is not improbable that it was seen by him, and its situation of course accurately ascertained. It is a real loss to geography that this able officer, a disciple of the great Cook, should not have published his voyage in this sea in the years 1789 and 1791. All that is hitherto known of his run is the course of his ship, the track of which is in Arrowsmith's chart, *The South Sea Pilot*; and notwithstanding he promises, in the preface to his voyage in the years 1793 and 1794, to publish his early voyages also, the world has hitherto been deceived in its expectations. Sir Erasmus Gower possessed the manuscript of his voyage in the Japanese sea in the year 1791, when that officer was charged to convoy Lord Macartney to China, and had to navigate the Yellow Sea. It might almost be believed that the English government had purposely cast a veil

over the voyages of Colnett and Broughton on the coast of Japan, were it not that the liberality which they have shewn in publishing every voyage that has been undertaken during the last half century, a period so brilliant in the history of discoveries, completely controverts this suspicion. Seven years have elapsed, and Captain Broughton's voyage, which was entirely one of discovery, has not yet appeared in print. The companion of Vancouver could not fail to have rendered his work very interesting to geography and navigation; and it cannot be supposed that with the loss of his ship, his journals and charts were all destroyed; the rock Captain Broughton split upon lies, according to Arrowsmith's chart, in latitude 25° N. and longitude $145^{\circ} 40'$ E. of Greenwich.*

The dark stormy weather continued through the night, but as the wind was favourable I could not but avail myself of it, though it was with great caution that I steered rather a more southerly course. In the old charts of Japan that accompany the works of Charlevoix, Kämpfer, and the collection of voyages by La Harpe, the island Fatsisio lies in latitude $31^{\circ} 40'$, that is to say, $1^{\circ} 35'$ more to the south than in Arrowsmith's chart, who followed D'Anville, in whose "Carte Générale de la Tartarie Chinoise dressée sur les Cartes particulières, faites sur les Lieux par les RR. PP. Jésuites, et sur les Mémoires parti-

* Captain Broughton's voyage was published in 1804, during our absence; about the same time, therefore, that I was expressing my fears that it never would appear in print.

culiers du P. Gerbillon, 1732," Fastisio is laid down in $33^{\circ} 15'$, and 't Zuyder Eyland in $32^{\circ} 30'$.*

The next morning the storm from the N. E. abated a little, and veered round to S. S. W.; the weather still bearing a very threatening appearance. About eight o'clock the wind shifted again suddenly to the N. E. blowing as hard as before, with heavy rain. In the short time that it had blown from the S. W. when it was for a few moments tolerably calm, we saw several butterflies and *sea nymphs* which clearly proved the vicinity of land; an owl likewise came on board, and was no unacceptable present to Dr. Tilesius, who made a drawing of it; the weather was however so hazy that we had but a very confined horizon. The barometer, during this stormy weather, was higher than our former observations would have led us to expect, namely 29 in. 46. From a few altitudes which Dr. Horner was able to catch at noon he calculated our latitude at $31^{\circ} 13'$ and the longitude $220^{\circ} 50'$, exactly what it was by the ship's reckoning. We had run by the log in the last twenty-four hours 181 miles, and were now about a quarter of a degree to the north of what is given in the charts as the middle of the straits of Van Diemen, through which it was my intention to have sailed. Our course was therefore west, but I steered during the day rather more north in the hopes of seeing land.

I know no work where mention is made of the straits of

* Captain Broughton determines the latitude of Fastisio to be $33^{\circ} 06'$, only a few minutes, therefore, different from D'Anville.

Diemen, the situation of which is even set down very differently in the charts. In that of Arrowsmith, for instance, these straits lie between the island of Likeo (which is separated by a narrow channel from the large island of Kiusiu) and one which bears the name of Tanao-Sima, while again in the French chart they are between Kiusiu and Likeo. The geographical latitude of the entrance agrees pretty nearly in both of them. It will soon be seen that both the English and French charts are very incorrect in their description of these straits. On our arrival at Nangasaky, Captain Musquetier, the commander of a Dutch ship lying there, informed me, that they were discovered by accident in the beginning of the 17th century; a Dutch vessel, on its passage from Nangasaky to Batavia, having been driven in a violent storm through them, and the captain of it giving his name to them. Captain Musquetier, who appeared to me a very well informed man, kindly offered to send me an old Dutch book in which I should find an account of this discovery, together with a description of the straits, but probably the jealousy of the Japanese prevented him from fulfilling his promise. This literary curiosity would have been extremely interesting to me.

On the 23d September, in latitude $31^{\circ} 13'$ and longitude 221° , the variation of the needle was $1^{\circ} 02' E.$, the next day it was $0^{\circ} 02' W.$, and the same evening in $31^{\circ} 21' N.$, and $225^{\circ} 00' W.$ this westward variation had already increased to $2^{\circ} 49'$. If the mean of these three observations be taken, we must have crossed the magnetic meridian in $31^{\circ} 15'$ latitude and $220^{\circ} 20'$ west longitude.

The 24th September was the finest day we had had since leaving Kamtschatka; Dr. Horner and myself did not neglect to avail ourselves of the opportunity of trying our time-pieces. Two sets of distances of the moon from Venus, which we both took at half past five in the morning, gave, reduced to noon, $= 223^{\circ} 21'$. Seven sets of distances of the moon from the sun, between which the greatest difference was only $6' 45''$, gave, reduced also to noon, $= 228^{\circ} 28'$. Arnold's chronometer, No. 128, and that by Pennington, which on this day did not vary a second from each other, gave us the longitude $= 223^{\circ} 16'$, and Arnold's small chronometer, No. 1856, $= 223^{\circ} 30' 45''$, and by the mean of twenty calculations of the moon's distance from the sun which we observed the next day the error of No. 128 was only $2'$. This near coincidence left us no doubt upon the rate of all our watches, and I waited with impatience to see the coast of Japan which we could now so correctly determine. A number of butterflies, *sea-nymphs*, land-birds, branches of trees and grass convinced us that we could not be far distant.

At ten o'clock in the morning of the 28th September we at length discovered the coast of Japan to the N. W., while we were busied taking lunar observations, which, like those of the preceding day, only differed a few minutes from No. 128. I immediately altered my course, steering N. W. with a moderate W. S. W. wind. Our latitude at noon, observed very carefully with several sextants, was $32^{\circ} 05' 34''$, the longitude by No. 128 $= 226^{\circ} 22' 15''$. A lofty promontory, in front of which there appeared to be a small island, bore, at this moment, N. W. 28° distant about thirty-six miles. The wind that had hitherto

been very moderate, became, about four o'clock, rather fresher and enabled us to approach nearer to the land, and to take several bearings; we were still, however, at sunset, upwards of twenty miles from the nearest shore, having no soundings with a line of 120 fathoms. The coast stretched from N. W. $20^{\circ} 30'$ to N. W. 41° : the above mentioned promontory lying as far to the south-east as we could see. Although its situation was such that we could scarcely avoid any errors in the determination of its longitude and still less of its latitude, I nevertheless believe that, if any occurred, they did not exceed a few minutes. By our observations it was in $32^{\circ} 38' 30''$ latitude and $226^{\circ} 43' 15''$ longitude, and was probably the south point of Sikokf. From this cape the land took quite a northerly direction, and seemed to form a small bay of which we could distinguish the northern and western shore. In the vicinity of the promontory the country appeared to be very mountainous, sloping gradually to that part where we supposed this bay to be; it then rose again suddenly, and in the back ground of the bay, there was a large valley, bounded to the east by a chain of hills of moderate elevation; but on the west by lofty mountains, among which two were particularly conspicuous by their height and must always make this part of the coast easily known.

My hopes of being able to continue my examinations of this coast were fruitless. The next morning at day-break we perceived the land bearing N. W. 10° , but I had scarcely bent my course thither when the sky became overcast; and we not only lost sight of the coast, but our horizon did not extend, at the farthest, above an English mile. The wind blew fresh from the

N. E. with constant rain ; and I considered it as not only useless but dangerous to approach the land now, as we could not in the least depend upon our charts, even though of the best. I steered, therefore, under easy sail W. and W. S. W. Towards evening the wind increased with a constant heavy rain ; the sky wore a most threatening aspect, and I determined to lie-to till the next morning, and the wind increasing about midnight to a perfect storm we laid the ship to the eastward. This bad weather continued throughout the next day, and we therefore steered to the eastward under reefed courses. In the night the wind abated, veering to the south-east ; and at day-break, the weather appearing clearer and the sun shewing himself, I again began to approach the land ; but the heavy swell from the south-east, and the constant depression of the barometer, seemed, notwithstanding the sun at noon was sufficiently clear for us to take a tolerable observation in $31^{\circ} 7' N.$ and $227^{\circ} 40' W.$ the certain forerunners of a storm from the south-east, which, as we were on an unknown coast, was not to be despised. We held our course, however, to the west until 11 o'clock, when I altered it to the south, and set as much sail as the ship could carry. About noon the weather assumed an appearance that left us no doubt of what would soon follow. The waves ran mountain high from the south-east ; the sun was of a dead pale colour, and was soon concealed behind the clouds which flew with rapidity from the same quarter ; and the wind, which increased gradually, rose by one o'clock to such a height as to prevent our taking in the topsails and courses without the greatest difficulty and danger, the tackle, though almost all new, mostly giving way ; but our men were

animated by an undaunted courage and a noble contempt of danger, and would not yield, so that not a single seam in any one sail was split. About three o'clock in the afternoon the storm had increased to such a degree as to rend all our storm-sails, the only ones we had set. Nothing could equal the violence of the gale. Much as I had heard of the typhons on the Chinese and Japanese coasts, this exceeded all my expectations. It would fall within the province of the poet to describe it properly, and I shall content myself with relating its effect upon our ship. It was absolutely impossible to set even a double reefed mizen storm-stay sail, and she was left quite to the mercy of the waves, which ran extremely high. I expected every moment to see the masts go by the board; the state of the atmosphere was particularly evinced by the extraordinary depression of the barometer: the quicksilver falling so suddenly that about five o'clock it had not only quite disappeared from the tube, but the great motion of the barometer, for which we had before calculated at least four, and even sometimes five lines, not even bringing it in sight. As our barometer was divided into twenty-seven inches, six lines, if we deduct from this four lines, the height of the quicksilver could only be twenty-seven inches, two lines; and it might be said, without extravagance, that it was only twenty-seven inches and indeed even less, as it was upwards of three hours before it again made its appearance. There may undoubtedly be more violent storms than this, and the dreadful hurricanes which rage in the Antilles every year, are most probably worse; but I never recollect the barometrical state of the atmosphere to have been noticed during one of these tremendous revolutions of nature. The Abbé

Rochon* mentions a hurricane in the Isle of France in 1771, when the barometer fell to twenty-five inches French, which was therefore three and a half lines lower than with us, if it be admitted that ours had fallen to twenty-seven inches.

I was not afraid of the ship so long as the masts would stand ; but we were placed in another great danger, known indeed only to myself and to one or two persons on board: the wind that blew from E. S. E. drove us directly towards the land, from which we could not then be at any great distance. I fancied indeed we might still have room to drive until twelve o'clock, but if we had once touched the ground the ship must have gone to pieces, and, in so violent a storm, it would have been impossible to have saved the people. Nothing but a change of wind could remove our danger, and fortunately this took place, and it veered from E. S. E. to W. S. W. On the sudden shift of wind a sea struck the ship's stern, carried away the larboard quarter gallery, and flooded the cabin three feet deep with water, which occasioned me the loss of almost all my charts and books. This critical moment preceded a perfect calm, which fortunately lasted only a few minutes ; we, however, availed ourselves of it to set a reefed mizen-stay sail, that we might be able to lay the ship in some degree to the wind. *See 1818.* It was scarcely hauled home when the storm began to rage with the same fury as before from its new quarter. About ten o'clock it at length appeared to abate a little, and we again, to our great joy, saw the quicksilver in the barometer. We considered this

* Voyage à Madagascar, à Maroc, et aux Indes Orientales, par Alexis Rochon. 3 vols. in 8vo. An X. de la République. 3 tom. page 418.

as a certain proof that the storm would not resume its fury; and about midnight it was observed to abate considerably, although still blowing very hard. This indeed was very fortunate; for if the gale from the W. S. W. had not been altogether as violent as that from E. S. E. the first waves would not so soon have subsided, and our masts must have been in greater danger than before. The leak in the ship gave us less trouble during the tempest than I expected; for as the ordinary increase of water was before from seven to twelve inches an hour, we were not a little pleased to find that during the gale it was not, at the utmost, more than fifteen inches; but the very heavy roll of the ship rendered it difficult to work the pumps.

This tempestuous weather was followed by an extremely beautiful day, which was very welcome to us, and enabled us to get the ship again in order. She had not indeed suffered much in her hull, but the rigging required considerable repairs. The wind fell gradually, and now came from the west; and as soon as the sails could be set, which was not until noon, I steered to the northward. About six o'clock we saw land bearing W. N. W. distant nearly forty-five miles. It was calm throughout the night, but the swell had not quite subsided, and drove us rather to the eastward. About nine the next morning we perceived the land bearing due west; and as we only neared it very slowly, it was still distant at noon about thirty-six miles, stretching from N. W. 30° to N. W. 84° . Our latitude was at this time by observation $31^{\circ} 42'$, and the longitude $227^{\circ} 43' 30''$. At half past two we were nearly twenty miles from the land, but it now fell almost calm and continued so until ten o'clock at night, and we moved but very slowly for-

wards until rather a heavy squall brought us within a few miles of the land. The variation of the compass was found to be here $3^{\circ} 1' W$.

The country in general appeared to be very mountainous; and the hills, among which were some very lofty peaks, were in double and sometimes in three and four rows. To the N. E. the land terminated in a lofty promontory, bearing about four o'clock N. W. 18° . This promontory, which, in honor of the companion of Behring, I called Cape 'Tschirikoff, lies in $32^{\circ} 14' 15'' N$. and $228^{\circ} 18' 30'' W$. We saw, at the same time, to the N. N. W. a bay, the eastern point of which is formed by a double promontory that at first, though I was in all probability mistaken, appeared to me to be an island. To this headland I gave the name of Cape Cochrane, after Admiral Cochrane of the English navy, under whose direction I spent three of the most profitable years of my service: it may easily be known by its form, but more particularly by a round conical hill which lies behind it, and from whence the land suddenly falls away to the eastward; but the surest mark of this part of the coast is a high peak parallel with Cape Cochrane. From this cape lying by observation in latitude $31^{\circ} 51' 00''$ and longitude $228^{\circ} 33' 30''$; the coast of the island of Kiusiu* assumes quite a southerly direction, which indeed it does from Cape 'Tschirikoff. The land to the northward of Cape Cochrane is much higher than to the southward: but the coast in this latter direction is distinguishable by a high hill with a flat summit, and still farther to the south, by three hills of moderate height, and at a short

* There was no doubt that the land we saw was part of the island of Kiusiu.

distance from each other. At sun-set we were about fifteen miles from the land, which now afforded us a clear and beautiful prospect. It trended from the N. W. 15° to S. W. 65° where a pretty lofty promontory bounded our view. In the west we saw a very conspicuous land, stretching for about ten miles from north to south, and having quite the appearance of a long narrow island; although this was my opinion as well as that of many persons on board, it is equally probable that it was connected with the main. The northern point of this headland was in $31^{\circ} 48'$, its southern point in latitude $31^{\circ} 38'$ and longitude $228^{\circ} 30'$.

About ten o'clock a gentle breeze sprang up at E. N. E. and we steered under easy sail to the south-east. At four the next morning it blew fresh from N. by E. and I now directed my course to the land. Although the ship had been driven by a strong current far to the southward, we were, nevertheless, at day break in such a situation that we could combine our bearings with those of yesterday. The cape we had seen yesterday evening bearing W. S. W. now bore N. W. 37° , projecting very much to the S. E. and apparently of considerable height. This promontory I called D'Anville, after the celebrated French geographer, to whom this science is infinitely indebted; and whom the eloquent Gibbon calls the prince of geographers, although none have hitherto thought of introducing his name in their charts. From Cape D'Anville, which is by our observations in latitude $31^{\circ} 27' 30''$, and longitude $228^{\circ} 32' 45''$, the coast trends rather to the westward, till it reaches another point which appeared to me to be an island, and

forms the north-east extreme of a great bay that we perceived about seven o'clock. As this bay, as far as the eye could reach, appeared to be perfectly clear, and as I believed at that time in the existence of the island of Likeo, I expected to find here the passage, which, according to Arrowsmith's charts, leads between that island and Tenegasima.* With regard to the land to the S. W. of this great bay, I had no kind of doubt of its being the island of Likeo; and the perfect agreement in respect to their latitude at that time, fully persuaded me that I was right in my conjectures. During my stay at Nangasaky, however, I convinced myself through the Japanese, that the land that forms the north side of the straits of Van Diemen is not Likeo, but the province of Satzuma, as it is denominated in D'Anville's charts. I long had suspected some mistake upon this head, and asked almost all the interpreters of the Dutch factory about it. The well known situation of Volcano island; our vicinity to this coast, which had been observed;† and the positive assurance of the Japanese, of there being no large island near Japan called Likeo, have convinced me of the non-existence of this island, which the English charts describe to the north, and the French to the southward of the straits of Van Diemen; and that this name belongs only to the

* In a later edition of Arrowsmith's large chart of the South Sea, in nine sheets, the straits of Van Diemen, and the islands of Tenegasima and Likeo are quite omitted. Arrowsmith has only preserved the island of Tanao-sima in $30^{\circ} 43' N.$ and $131^{\circ} 08' E.$

† From the moment in which we were first seen, that is to say, from the 3d October, boats were daily sent to the governor of Nangasaky, so that the Japanese were perfectly acquainted with our route.

group of which the largest lies in nearly 27° of latitude. According to these inquiries I have called the southern part of Kiusiu, Satzuma, omitting altogether the name of Likeo. The Japanese assert that the king of the Likeo islands, whose residence is in the large island bearing this name, and whom they describe as very rich and powerful, is dependent on the Emperor of Japan; that whenever a new emperor ascends the throne, he is required to send an ambassador to Jeddo; and that these islands belong to the province of the Prince of Satzuma, whom, in case of any war, the king is expected to support with a powerful fleet. At the same time they do not deny that the kings of Likeo acknowledge a subjection to the emperors of China, and pay a tribute to both of them in order to preserve peace; for, according to the reports of the Japanese, the Likeors are of a goodnatured and gentle disposition, and great lovers of peace; and in this respect were compared by them to women. This asserted dependence of the Likeors on the Japanese, though to me very doubtful, and the little geographical knowledge of the latter, as well as their total ignorance in respect to the calculation of distances,* are perhaps the reason why the Japanese have placed the Likeo islands in their charts much nearer to their coast than they really are. The first Europeans who gave us charts of Japan, copied those of the natives with all their errors, and this has led modern geographers to confound some of the Likeo islands with the islands of *Jacono-sima* and *Tenega-sima*, which lie opposite the

* I did not meet with a single interpreter who could tell me accurately the distance from Satzuma to Likeo.

coast of Satzuma at a distance from twenty-five to thirty miles, and form the south shores of the straits of Van Diemen.

About eleven o'clock we had approached within fifteen miles of this supposed passage, where we now saw some small islands, and presently afterwards remarked that it was inclosed on all sides by the land. I conceived that any farther search for a passage between these islands (which we have since learnt does not exist) would be attended with a loss of time, particularly as the wind was not favourable to our entering the bay; and I feared that the well known jealousy of the Japanese, who have forbidden the Russians, as well as other nations, from approaching their coast any where else than at Nangasaky, might have been so offended at such an inland navigation, as to endanger the success of our embassy. I therefore gave up this attempt, and held my course about eleven o'clock W. by S. towards the south-east point of Satzuma. At this moment Cape D'Anville bore N. W. 6° , and the south-west point of the bay, which I have called Cape Nagaëff, in memory of the first Russian hydrographer, and which lies in $31^{\circ} 15' 15''$ N. and $228^{\circ} 49'$ W. bore N. W. 60° . A very lofty mountain, the highest of any that we had seen upon the coast of Japan, bore N. W. 26° of us. The middle of this mountain, near to which were two others of nearly the same height, lies in $31^{\circ} 41'$ N. and $228^{\circ} 48'$ W.; this I have distinguished by the name of my friend Schubert, the celebrated astronomer.

The width of the bay, the proper name of which I was unable to learn, from Cape Nagaëff to the north-east point, bearing nearly N. E. and S. W. of each other, is at least ten miles, and

its depth fifteen; but although the water entirely changed its colour, we had no soundings with a line of 120 fathoms.

We had scarcely shaped our course to the south-east point of Satzuma when we saw land in the S. W. which I conceived to be the island of Tanao-sima, marked in Arrowsmith's chart as forming the south side of the straits of Van Diemen. The proper name of this island, as I learnt at Nangasaky, is Jaconosima, and it is very much visited by the people of that place on account of its timber. I was assured that all the planks we obtained there, with the exception of the camphire wood, were brought from thence: it is very low, and resembled, as we first caught sight of it, the island of Lavensaar in the Gulph of Finland. The tops of the trees only appeared above water, and it was not until we were a good way within the straits of Van Diemen, that we could see the whole of the island. It is entirely flat, and completely overgrown with wood, which gives it an agreeable appearance; is about eighteen miles long, and lies nearly N. and S., and its greatest breadth is about one third of its length. About the middle this width is diminished nearly half by two bays on the east and west sides, which makes it at a little distance look like two islands. Its northern extremity lies in latitude $30^{\circ} 42' 30''$, and in longitude $229^{\circ} 00'$; the south point in $30^{\circ} 24' 00''$ N.

Towards noon the south-east point of Satzuma bore nearly due W., distant about twenty miles. The latitude, which at this moment was observed with the greatest accuracy, was $31^{\circ} 4' 40''$ N. and the longitude at the same time $229^{\circ} 40'$. Shortly after noon there appeared in the S. W., behind the island of

Jaconosima, and at a great distance, some very high mountainous land that seemed to be of a greater circumference. Captain Colnett, who sailed between the islands of Usasima and Kikiay, must have seen this island,* the name of which, as I am informed by the Japanese interpreters, is Tenegasima, the same as it bears in our chart. The middle of this island was in latitude $30^{\circ} 23'$ and longitude $229^{\circ} 30' 00''$ W.

About two o'clock we had soundings with a line of seventy-five fathoms: grey sand, with black and yellow spots, and broken muscle shells. The wind now died gradually away, and we got into a ripple or partition of the water, which was occasioned by a change of the tide. It advanced quite in a direct line towards us, bringing a quantity of grass, pumice stone, broken pieces of wood and planks. The ship would not answer the helm, but drove to the northward towards the shore. About half past four the strength of the current had abated so much, that she again became manageable, and I shaped my course to the south-west, parallel with the coast. A small, but lofty island, with a broad double summit, immediately recognized by us to be Volcano island, soon hove in sight, and some small islands, as well as the south end of Satzuma, were visible from the mast head. As the night was clear and the wind moderate, I did not bring-to, but continued my course under very easy sail. Fires were lighted upon Satzuma, and in different places on Jaconosima, so that with very little attention our navigation during the night was perfectly safe. The lead was

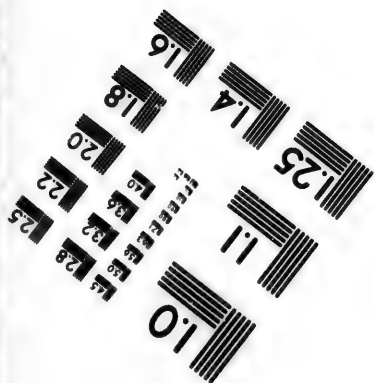
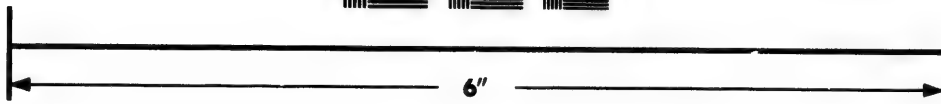
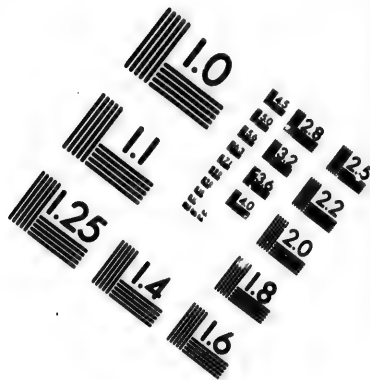
* Arrowsmith has omitted the islands Usa-sima and Kikiay, and those which Colnett probably called Pinnacle islands, in his new chart.

hove every half hour, and showed a depth of from fifty to sixty fathoms, over a ground of the same description as we had found at the entrance of the straits. The number of fires kept burning, served probably as signals; the appearance of a large European ship no doubt causing a great sensation among so timid a people. At day-break we saw a small island, which I have named Seriphos. It was merely a naked rock, about half a mile in diameter. Well to the westward of this island, at the distance of about twenty-four miles, is Volcano island, with another very near it to the eastward, of almost the same height, that obtained the name of Apollo. A fourth, fifteen miles south of Volcano, and about six miles in circumference, I called Julie. Farther to the westward we saw another exceeding all those which I have mentioned in point of size, and to which I gave the name of St. Claire in our chart. As I had seen in some charts an island of this name on the south-east coast of Japan,* I conceived it useful to distinguish the other islands which lie in the straits of Van Diemen with names, as notwithstanding all my endeavours in Nangasaky, I was unable to learn them properly in Japanese. The following is the longitude and latitude of the five above-mentioned, determined by astronomical observations.

Volcano island	-	30° 43' 00" N.	229° 43' 20" W.
Seriphos	- - -	30° 43' 30" N.	229° 15' 30" W.
Apollo	- - -	30° 43' 45" N.	229° 36' 00" W.
Julie	- - -	30° 27' 00" N.	229° 46' 30" W.
St. Claire	- - -	30° 45' 15" N.	229° 05' 45" W.

* The island of St. Claire is also omitted in Arrowsmith's new chart.





Photographic Sciences Corporation

**23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503**



At seven in the morning the south end of Satzuma bore nearly N. This cape, which lies in latitude $30^{\circ} 56' 45''$ and longitude $229^{\circ} 23' 30''$, consists of a broken mass of rocks, stretching out to the southward, near which there are two smaller rocks, one pointed, and the other of a circular form. This promontory I have called Cape Tschitschagoff, after the meritorious admiral of that name, who has acquired so honourable a place in the annals of Russian navigation, by his voyage to the north pole, and his victories over the Swedish fleet.

We had scarce weathered Cape Tschitschagoff, the southern point of Satzuma, when we perceived a lofty mountain of a conical form, the base of which was quite at the water's edge; I called it, after our astronomer, Peak Horner, and it lies in latitude $31^{\circ} 9' 30''$ and longitude $229^{\circ} 32' 00''$. The situation of this remarkable mountain was ascertained with the greatest precision by Dr. Horner; and this and Volcano island form two unerring marks of the straits of Van Diemen. In the N. E. a large bay opened upon us, extending far to the northward and having apparently a passage in that direction, though it probably is bounded there. This bay, of which Cape Tschitschagoff forms the south-east point, and Peak Horner the north-west, had a very picturesque appearance, a number of small islands lying in irregular shapes on the north-west side of it, two of which, forming a large bow in appearance, were very remarkable. The whole bay, excepting to the north, is surrounded by high mountains, whose summits were covered with the most beautiful verdure. Peak Horner stands on a point of land, and seemed to rise out of the sea, adding very much to the picturesque appearance of the country.

I now steered N. W. & W. towards a point of land forming, on the other side of the above mentioned peak, another very beautiful bay, and divided into two parts by the land to the northward projecting very far forward. The western bay, where there was a small town, was surrounded by a charming valley, divided into large fields and regular plantations of large trees. A high pointed needle rock stands at a short distance from the shore, and forms the entrance to this small bay, in which some vessels were lying at anchor. Behind the valley and far inland, was a mountain of a regular and unbroken appearance, from the middle of which arose a lofty peak. Our latitude at noon was by observation $31^{\circ} 9' 17''$ N. and agreed very nearly with that of our reckoning; a proof that the currents, which are so strong as to render the ship, when there is but little wind, quite ungovernable, proceed from a regular change of ebb and flood. By our observations it is high water in the straits of Van Diemen at nine o'clock at new and full moon, the flood setting from the south-west, the ebb from north-east. Until seven o'clock we had alternately a perfect calm, and a very moderate breeze, it was therefore nine o'clock before we could weather a large promontory, after passing which, the coast of Satzuma takes a north-west direction.

The south-east side of Satzuma from its south-east extremity, takes nearly a north-east by north and south-west by south direction. Behind this extremity there is a bay to the westward: all the shore was apparently formed of craggy rocks, and I very much doubt whether there is any anchoring place on this side; the land is mountainous, but not particularly distinguishable on account of its height. On the east side of Cape Tschitschagoff

the coast assumes a much more beautiful appearance, the country descending gradually to the shore, where there are several small bays, and this part, that seemed to be the most fruitful, is probably the best inhabited, of which the number of fires kindled along the coast during the night, and the quantity of boats we saw rowing and sailing about, afforded a sufficient demonstration. The distance from Cape Nagaeff to Cape Tschitschagoff, that is to say, from the east to the southernmost point, is thirty-four miles: from this latter point the direction of the coast to Peak Horner is N. W. by N. ; and from this to another forming the south-west point, nearly W. : and it is here the bay which I have mentioned is situated. This part of Satsuma is particularly beautiful ; and as we sailed along at a very trifling distance from the land, we had a distinct and perfect view of the various picturesque situations that rapidly succeed each other. The whole country consists of high pointed hills, at one time appearing in the form of pyramids, at others of a globular or conical form, and seeming as it were under the protection of some neighbouring mountain, such as Peak Horner, or another lying north by west of it, and even a third farther inland. Liberal as nature has been in the adornment of these parts, the industry of the Japanese seems not a little to have contributed to their beauty ; for nothing indeed can equal the extraordinary degree of cultivation every where apparent. That all the vallies upon this coast should be most carefully cultivated would not so much have surprised us, as in the countries of Europe, where agriculture is not despised, it is seldom that any piece of land is left neglected ; but we here found not only the mountains covered to their very summits with the most beautiful fields and plantations, but even the very rocks by the sea

side, forming a striking as well as singular contrast, by the opposition of their dark, grey, and blue colour to that of the most lively verdure. Another object that excited our astonishment was an alley of high trees, stretching over hill and dale along the coast, as far as the eye could reach, with arbours at certain distances, probably for the weary traveller, for whom these must have been constructed, to rest himself in, an attention which cannot well be exceeded. These alleys are not uncommon in Japan, for we saw a similar one in the vicinity of Nangasaky, and another in the island of Meac-sima.

From the south-west point the direction of the coast is N. W. by N. ending in a large promontory, that forms the western extremity of Satzuma. This promontory, which I have called Cape Tchesma, in memory of the famous and total destruction of the Turkish by the Russian fleet, lies in $31^{\circ} 24' 00''$ N. and $229^{\circ} 58' 00''$ W. There are several projecting points of land forming small bights, from which reefs of rocks run a short distance into the sea, between these two promontories. We sailed by in the night and could not therefore take any distinct survey of Cape Tchesma, although we saw this promontory sufficiently distinct the next morning to be able to ascertain its position with tolerable accuracy. From Cape Tchesma, the coast again runs due east, forming to the north a large bay, that lies nearly at the back of the one we had seen the day before on the east side. Had I not fully persuaded myself during my stay at Nangasaky, that Satzuma formed part of Kiusiu, I should have supposed a communication between these two bays; but there can be no doubt, though I did not examine either of them, that all this part joins to the

main land. The greatest length of Satzuma, namely, from Cape Satzuma to Cape Tschesma, which lie nearly east and west of each other, is sixty miles, and its extreme width from Cape Tschitschagoff to the farthest land we were able to follow with the eye to the northward, is thirty-six miles; very nearly the dimensions of the island of Likeo, as it is laid down in Arrowsmith's chart.

A short time before sun-set on the 5th October, as we sailed parallel with the south-west coast of Satzuma, we saw in the north-west a high land looking like an island, which we afterwards learnt was the island of Meac-sima. I steered during the night towards it under easy sail, and we were at day-break about six miles from its south-west extremity: Cape Tschesma at the time bearing E. S. E. eighteen miles distant. We discovered besides two small islands, one of which was merely a rock; but the other was of a circular form, and about three miles in circumference. These two rocky islands, which I have called Symplegades, lie in a north-east and south-west direction of each other, and are separated by a channel about six miles wide. The north-easternmost, in latitude $31^{\circ} 30'$, and longitude $230^{\circ} 18' 20''$, lies S. E. 20° distant about six miles from the south-west point of Meac-sima. The one to the south-westward lies in latitude $31^{\circ} 26'$, and longitude $230^{\circ} 22' 30''$. To the north-east we had seen a large promontory that, together with Cape Tschesma formed the bay on the west side of Satzuma, of which I have already spoken, and which I shall call Satzuma bay. The distance between these two promontories, which lie north and south of each other, is eighteen miles. In this bay there appeared to be se-

veral smaller ones, where there must be excellent harbours, as even the large one is nearly enclosed by the land. Here, too, from what I was able to learn from the Japanese interpreters, is the chief harbour of the province, and the residence of the Prince of Satzuma. This harbour, whose name the interpreters could not tell me, is probably Cango-sima, where in 1542, according to Charlevoix, the three Portugeze, Antonio Mota, Francisco Zeimota, and Antonio Pexoti, landed, having been driven in a gale upon the coast of Satzuma, and from which St. Francisco Xavier sailed in 1550 to Firando.

The land that surrounds Satzuma bay is very mountainous; and a high land is particularly distinguishable to the northward, upon which runs a line of mountains of a wavy form, having a high peak in the center of them, the same that we saw the day before. To the north-westward of these there is a double peak, adjoining to a table mountain, from whence a constant smoke ascends. This, from its description, seems to be the Unga mountain, so remarkable during the persecution of the Christians in Japan; for it was to this place that the unfortunate enthusiasts, to whom the Jesuits had imparted their religious delirium, were brought, and afterwards plunged, if they persisted in not returning to the religion of their forefathers, into the crater of the volcano. Its situation is in latitude $31^{\circ} 43'$, and longitude $229^{\circ} 46'$. The promontory which forms the north point of Satzuma I have called Cape Kagul, in memory of the glorious victory obtained by Field Marshal Romanzow over a very superior Turkish army. It lies in latitude $31^{\circ} 42' 20''$, and longitude $229^{\circ} 53'$. Between Cape Kagul and the north-east side of Meac-sima there appeared a passage,

seemingly more than ten miles wide, and I now bent my course towards it. As we approached it, we perceived that the coast from Cape Kagul first assumes quite a northerly direction, but afterwards runs more to the westward; and that from the north-east point of Meac-sima a number of small rocky islands extend in the same direction with the coast, viz. N. E. and S. W. forming a reef as far as the eye can reach. Among these rocks, which are almost all white, there was one particularly remarkable, in the form of a tower, having two high trees on the top of it. Our hopes of finding a passage here were considerably diminished; but so long as the wind, that blew pretty fresh from the south-east, should hold, I was resolved not to give up my purpose of examining this entrance more closely. About noon the wind fell and became changeable, and at two o'clock, as we could no longer expect to obtain before night a thorough knowledge of this part, and must consequently be obliged to wait for the next morning, I gave up this intention, and held my course to the south in order to weather the south-west point of the island. At this time our distance from its north-east extremity was three miles, and we had soundings with a line of forty fathoms on a bottom of clay with sand and coral. We now for the second time sailed along the coast, and had therefore the best possible opportunity of surveying this side of the island with accuracy.

Meac-sima is very incorrectly placed in all the charts, as well with regard to its position, as the direction in which it lies. In some it does not exist at all, in others it is represented as a small island at a distance of seventy-five miles from the

coast of Japan. We found it to consist of several small islands lying so close to each other, that the different channels that divide them can only be seen at a very short distance. These channels must form excellent ports for small vessels, at least if we may judge from the number of them that were sailing from all directions towards the island, and immediately disappeared either in the channels themselves or behind the rocks. This whole island is formed of rocks, but the industry of the Japanese is apparent even here, for green fields and plantations of trees are to be seen on all sides, and, as in Satzuma, there is a long alley of trees that is carried over some pretty lofty hills. The greatest length of this island in a north-east and south-west direction is eighteen miles, without reckoning the small ones and rocks that run out in a straight line from the north-east point as far as the eye can reach. Its width bears no proportion to its length. The south-west part, the widest half of the island, is not more than four miles. The south-west point lies in latitude $31^{\circ} 35' 30''$, and longitude $230^{\circ} 20'$, the north-east point in $31^{\circ} 49'$ and $230^{\circ} 9'$. Comparing the latitude of the center $31^{\circ} 43'$ with that of the island of Meac-sima as laid down in Arrowsmith's charts, no difference appears between them, and but very little in the longitude. But its size is there diminished by at least a quarter, and instead of the seventy-five miles, at which distance it is placed in that chart from the coast of Japan, there is only a narrow passage, at the most, of five miles between the coast and the reef of rocks that join the island. The Dutch, who every year sail by Meac-sima, have probably placed it more correctly in their charts; but as these are never imparted to the world, the geographers of Europe will derive the first accurate knowledge of

the coast of Japan from a nation from whom they perhaps the least expected it.

During the whole day we were surrounded by a number of small Japanese vessels that sailed about us in different directions, never approaching near enough to speak with us, but on the contrary most carefully avoiding us. We made signs to them and hailed them by their countrymen, but all in vain. As they are forbidden the least intercourse with strangers, and on this account dare not give any answer even to the most simple question; we would not bring them into danger by calling them any longer, although we could not help wondering at the absolute dependence and great self-denial of these people.

A little before dark we perceived a shelf rising from a group of black pointed rocks, which lies in latitude $31^{\circ}42'20''$, and longitude $230^{\circ}26'30''$, 7 miles N. W. 39° from the S. W. point of Meac-sima. These I called the rocks of Nadeshda. At day-break we saw land to the northward, and recognised it to be the Gotto islands, and two small rocky islands, one of which is flat, but the other lying about one mile to the southward of it, and about two miles in circumference, is pretty high and has two hills upon it. These are probably the same that are called Asses-ears in Arrowsmith's charts. They lie in $32^{\circ}2'30''$ N. and $231^{\circ}23'30''$ W.; from Cape Gotto S. W. 9° , 33 miles, and from the south-west point of Meac-sima N. W. 65° , 58 miles. The variation of the compass we this day found to be 55° W.

About noon our latitude by observation was $32^{\circ}22'3''$, Cape Gotto at that time bearing N. W. 39° , and the northern extremity of this chain of islands N. E. 14° . At four o'clock in the

afternoon we were three miles nearer to the shore, and as the wind was moderate and the current ran strong to the north-east, I put the ship about. We saw too little of the Gotto islands to enable me to say any thing satisfactory with regard to them, and, upon our departure next year from Nangasaky, the stormy and misty weather prevented our seeing them at all: Cape Gotto, the south-western point of these, as indeed of all the Japanese islands, was however determined very correctly; it lies in latitude $32^{\circ} 34' 50''$, and longitude $231^{\circ} 16' 00''$. The Gotto islands form, to all appearance, a large, connected, and very mountainous country, stretching from W. S. W. to E. N. E. and in front of which there are a number of small islands all highly cultivated. In no place is there a spot to be seen, that is not covered with the most beautiful verdure.* These small islands are connected with rocks, among which, one of considerable size lying in latitude $32^{\circ} 34'$ is distinguishable, as it appears to have been split into three parts, and I therefore called it treble-cleft rock. See 242

I now steered with a moderate north-east wind, which did not freshen till towards the evening, under all sail E. S. E. The wind shifted in the course of the night, allowing us to lay N. E.: at day-break we saw that part of Kiusiu where Nangasaky is situated, right a-head of us. In the S. we perceived two high promontories, the southernmost in $32^{\circ} 30' N.$ and $230^{\circ} 11' W.$ The northernmost one, projecting more to the west, is very high, and formed by a double mountain, and lies in latitude

* In the Japanese charts they form a chain of islands, reaching to the island of Iky, of which the largest lies most to the S. W.

32° 35' 10", and longitude 230° 17' 30". This probably is Cape Nomo, described in some old charts as the southernmost point of the land to which Nangasaky belongs, and forming, with Cape Seurote, the two points of a bay in which that town is situated; this I have called Kiusiu bay, after the name of the whole island. It is full of islands and rocks, and the coast of Cape Nomo, until you get within the entrance of the bay, is very dangerous; as we did not find the harbour so much to the south, viz. 32° 32' N. as we expected it to be from the general plans, we sailed parallel with the coast at a short distance from these rocks, of which we saw several on the northern coast. Outside of the northern point of the bay of Kiusiu, were some islands which are probably a continuation of the Gottos, and form a chain stretching away to the N. E.; from Cape Nomo to the entrance of Nangasaky there were several small bights behind the rocks, bordered by the most beautiful vallies. The land in general bore decided proofs of the most diligent cultivation, affording a beautiful prospect, improved by the very long avenues of trees: behind the vallies bordering on the coast, the land to the northward formed itself into a chain of mountains. About noon we were by observation in 32° 36' 40" N. but still to the southward of Nangasaky. A boat now came along side, having a Japanese officer on board, which, after putting some questions to us, immediately returned; nearly two hours after another boat came to us, and continued with us until about half past five, when we came to an anchor at the entrance of Nangasaky bay in thirty-three fathoms water, over a bottom of fine grey sand, the north-west end of the island of Iwo-sima bearing S. W. 13°, Papenberg S. E. 74°, Cape Facunda N. E. 55°, our distance from the nearest land being about three quarters of a mile.

CHAPTER XII.

STAY AT JAPAN.

Reception of the Russians at Nangasaky—Our Disappointment—Mistrustful Steps of the Japanese Government—The Ambassador quits the Ship—Description of Megasaky, the Ambassador's Residence—The Nadeshda is carried into the Inner Harbour—Departure of a Chinese Fleet, and of two Dutch Ships—Some Account of the Chinese Commerce with Japan—Observations of an Eclipse of the Moon—Remarks on the Astronomical Knowledge of the Japanese—Unsuccessful Attempt of one of the Japanese brought from Russia to kill himself—Probable Reasons for this Attempt—Arrival of a Damio, or Nobleman, from Jeddo—The Ambassador's Audience with this Commissioner—Conclusion of all Diplomatic Business—Permission to return to Kamtschatka—The Nadeshda quits Nungasaky.

EVERY one knows the insulting jealousy which is observed towards strangers in Japan ; we had no right to expect a more favorable treatment than other nations ; yet, as we had an ambassador on board, who was sent merely with assurances of friendship, by the monarch of a powerful empire, bordering upon these people so suspicious in their politics, we hoped not to be received unfavorably. We expected that many liberties would be allowed us, which would in some degree alleviate our stay here, and render less irksome our long inactivity, (for we calculated upon spending at least six months here,) by the opportunity we should have of acquiring some information on this little known country, upon which the only Europeans competent to impart any knowledge concerning it, have, during the last two hundred years, made a rule not to publish any thing. Within this period, indeed, two travellers

have published their remarks upon Japan; and although both of them, comparatively speaking, were but a short time in this country, their accounts are undoubtedly important, being the only ones since the extirpation of the Christians, from which period the accounts of the Jesuits cease. They were, however, neither of them Dutch; so that Europe owes nothing to this nation, with respect to a knowledge of the Japanese empire. Does this proceed from fear that such a liberty would be severely reprehended by the government of Japan? or does it originate in indolence or policy? The first reason alone could exculpate them, if it were known that this government had disapproved of the writings of Kämpfer and Thunberg, which are well known to the Dutch interpreters, the spies of the Japanese government; and that they had expressly forbidden the Dutch to write any thing upon this government. But this is not the case. They have never even published a decent map of the situation of Firando and Nangasaky, Kämpfer's copy of a bad Japanese plan being the only one that is known; nor have we learnt from them the situation of the islands in the vicinity of Nangasaky, much less of those between this place and Formosa, parts which are yearly visited by two Dutch ships. The Japanese could not possibly consider it as a crime, that they should make known correctly the situation of these places, and I cannot help attributing this reserve of the Dutch to a ridiculous, mean, and at all events a very useless policy, contrary to the spirit of a philosophical age, and unbecoming a republican government. Has the trade of England suffered at all by the liberality of her government, or has that of the Dutch gained any thing by their disgusting secrecy? The state of English and Dutch commerce is too well known to every one to render it necessary that I should carry the comparison farther.

The reader will pardon me this involuntary digression ; I now return to our reception at Nangasaky.

Although we certainly expected to be allowed more liberty than the Dutch enjoy here, we found ourselves greatly mistaken. This trifling freedom, which can only be called so when compared with our confined state on board the ship, and which appeared to us at first so despicable, that we should have rejected it with scorn, if it had been offered to us on condition that we should demand no more ; even this little was entirely denied us, and the time of our stay here was literally a confinement, from which the ambassador was no more exempted, than the meanest sailor in the ship. It will therefore easily be seen, how impossible it was for those who continued on board, to obtain even the slightest information ; the Dutch interpreters, the only sources from whence this was to be derived, not daring to approach the ship during the ambassador's stay on shore.* The reader must not therefore expect any satisfactory account of Japan from me, although we continued above six months there, as I can only relate, in the order in which they occurred, those circumstances which in some measure tended to break the monotony of our situation. The greater part of these are indeed of no importance ; but I do not think it right to omit them, not only because every thing relating to a country so little known as this is, must possess a certain degree of interest, but as some general inferences may be drawn from a true, though dry and unentertaining narrative of facts.

* Only some of the lowest of the class of interpreters came on board to remove the presents, and unload the ship's provisions.

A short account of our confinement, and of the mistrustful conduct in general of the Japanese, without omitting such trifling favours as were shown to our ambassador, and which were entirely unprecedented in Japan, may therefore not be superfluous.

The first great proof of their jealousy was evinced in their taking from us all our powder and fire-arms, even to the fowling pieces belonging to the officers, among which were some of considerable value; and it was not until after four months' constant entreaties and representations that these latter were returned to them in order to be cleaned, though many of them were entirely destroyed by the time they were restored. The officers were indeed allowed to retain their swords, a favour which was never shown to the Dutch, and the soldiers were permitted to keep their musquets and bayonets. This last the Dutch have never been in a condition to demand, since they have always had the precaution not to show themselves here with a similar military attendance; but what really astonished me was, that the ambassador was not only allowed to carry his guard on shore with him, but that these were even permitted to retain their fire-arms. This favour was indeed granted to him with great reluctance, and the interpreters endeavoured, during several days, to prevail on him to yield up this point. They represented to him that it was not only against the laws of the country, but that it would shock the people to see armed soldiers of another nation in their country; that such a case had hitherto never occurred, and that it would be dangerous to comply with the demand; but when they found that these reasons could not induce the ambassador to forego his guard,

they strove to prevail on him to take only half the number on shore, but in this too he would not give way. That they should not allow the armed soldiers of a foreign nation to land in their country was perhaps the most pardonable of their pretensions; for even in the most enlightened countries of Europe this practice is unknown, and no ambassador has hitherto considered it as an affront to enter a foreign country without soldiers. The case was however too important for the governor to decide upon; and as a whole month was spent in negotiating it before the ambassador was allowed to land, it is most probable that a courier was sent on this account to Jeddo or Miaco for instructions.

After this small triumph over the Japanese, I must return to the insults they obliged us to submit to in the full extent of the word. We were not only forbidden to go on shore, but not even allowed to row about within a short distance of the ship, nor was it until after a six weeks' negotiation that a place was granted us, at a trifling distance, as a walk, and this only in consideration of the pretended illness of the ambassador. This place was close to the shore in a confined bay and was shut in on the land side by a high wall of bamboos; and although its whole length did not exceed an hundred paces, and its width at the most was forty, there were two watch-houses erected in its immediate vicinity. One single tree, but not a blade of grass, adorned this promenade, which was entirely upon a rocky ground. This place of course could not answer its intended purpose, nor was it used as such; but it was of great advantage for our astronomical observations which the Japanese did not in any way attempt to disturb. As soon as any boat put off

from the ship, for Kibatsch, for so this promenade was called, a fleet of ten or fifteen vessels immediately put themselves in motion, surrounding the boat on all sides, and in this same manner it was conducted back again.

The acquaintance which I had formed on the first day of our arrival with the captains of the Dutch ships, made a continuation of our intercourse very desirable, but I was never allowed to visit them, nor was any Dutchman permitted to come on board our ship. The barbarous intolerance of the Japanese government even went so far, as to forbid our forwarding letters by the ships going to Batavia, thus depriving us of the pleasure of sending to our families an account of our welfare. The ambassador alone was allowed to transmit a report to the emperor, but he was obliged to content himself with merely giving a short account of our passage from Kamtschatka to Nangasaky, and to acquaint his Majesty with the welfare of all persons on board his ship. This letter to the emperor was to be translated by the interpreters into Dutch, and a copy of the original left with the governors, written with such accuracy that every line was to terminate with the same letter as the original. This copy was delivered to the governor, and the original, after they had been compared together, was sent on board by two of his secretaries, in whose presence it was sealed. When the Dutch ships sailed we were ordered upon no account to send a boat off to them: and when I wished Captains Musquetier and Belmark a happy voyage, as they passed by me, and inquired after their health, the only answer I received was a sign with their speaking trumpet; for which the chief of the Dutch factory apologized in a letter to the ambassador, saying that the cap-

tains had been most positively forbidden to utter the least sound in answer to our questions. It is impossible to find words capable of expressing how shameful and barbarous such a conduct appears; and how much it is to be regretted that an enlightened European nation, owing its political existence to a love of freedom, and which has acquired celebrity by great actions, should so far debase itself from a desire of gain as to attend with submission and devotion to the hateful commands of a set of slaves. It is shocking, beyond description, to see brave men for several minutes in the most abject position before a banjos, who frequently belongs to the lowest of the people, and who does not return, even with a nod, the mark of respect which is paid to him.

When the ambassador at length received permission to land, a considerable building was appointed for his residence: but the seven towers of Constantinople are hardly so well guarded as our Megasaky, for this was the name of the Russian Dezima.* The house was situated upon a neck of land so near the sea, that on the south and east sides the water at high tide came close under the windows. When I say windows, indeed, I make use of an improper expression; for this word can scarcely apply to a square space about a foot wide, provided with a double lattice work, and which therefore admitted but very little light into the room. A high bamboo fence surrounded the whole building, not only towards the land, but even on the sea-face in spite of the waves; the protection of which the

* Dezima is the name of the small island upon which the Dutch factory is situated.

Japanese did not seem to consider sufficient. Besides these there were two rows of bamboo canes carried from the door down to the sea, as far as the tide ebbed ; in order, that when the boats came from the ships they might only land between these canes, a precaution which scarcely could answer any one purpose. A large gate with double locks formed the entrance from the water-side. An officer, whose station was near the ship, had the keys of the outer locks, and another, who lived in Megasaky, those of the inside ; and when any boat went on shore it was necessary that the keeper of the outward keys should accompany it to open his side, after which the inside was unlocked ; and in like manner, when any one on shore was desirous of going to the ship, the porter of Megasaky opened the inside, when the vessel on board of which was the keeper of the outer keys, had to repair to the house to perform the same duty. Besides this precaution the gates were never left open upwards of five minutes ; and though they sometimes knew that the persons would return immediately, the porter would rather take the trouble of locking and unlocking the gates again, than leave them open during this length of time. The land-side was guarded with a similar attention :—a strong locked gate being the boundary of a very small yard attached to the ambassador's house. As we had warehouses appropriated to us on the other side of this gate, the watchmen found the locking and opening too tiresome, and it was at last left entirely open ; but the second yard in front of these warehouses was surrounded by a row of guardhouses. Twelve officers and their men relieved each other daily in this duty, and three other entirely new buildings were run up, to serve as the residence of other officers, whose only employment must have been to keep a watchful look out upon

us and upon their own people. At short intervals, on the way to the town, were gates, which were not only locked, but guarded. During the latter part of our stay the two first were indeed left open, but the guards never quitted them for a moment. They counted always the number of persons who came on shore, and the boat was never allowed to return without a similar number; and if any officer of the ship wished to pass the night in Megasaky, one of the persons residing on shore was obliged to go back in his stead; and in like manner, when any officer belonging to the ambassador's suite was desirous of sleeping on board, some sailor had to fill his place on shore: for the appointed number of persons residing there was neither to be increased nor diminished, nor was any attention paid to their quality in this respect, but only to their numbers.

As all the ship's boats stood in need of repairs, and I wished to put a deck upon the long boat and to copper her bottom, I requested to be allowed a place where we might haul them up on shore. Such a place was certainly granted to us; but so narrow and confined, that it was impossible to work at high water, and it was entirely surrounded with bamboos like Kibatsch, and two boats kept guard constantly while the carpenters were at work. Nobody was allowed to take the least walk, and as they refused us a place to erect our observatory, we could not avail ourselves of the sight of the heavens, the only object which their bamboos could not conceal from us.* We were not allowed to pass the night in Kibatsch, so that no instrument could be erected there, and all our observations were

* Even the mountains near Megasaky were surrounded with bamboos.

reduced to lunar ones with corresponding altitudes, by means of Hadley's sextants to ascertain the time.

If I here adduce a number of complaints of the mistrustful conduct of the Japanese, I cannot deny, on the other hand, that all my requests for such materials as were wanted for the repairs of the ship were most punctually acceded to. Besides this, the men were not only regularly provided with provisions, but always with the best which could be procured in Nangasaky, and in the quantity that I demanded. Before our departure they furnished us with 8000 pounds of biscuit, as well as every other kind of provision for two months, independent of the presents from the emperor to the crew, of which I shall speak hereafter; but we were never allowed to purchase any thing for money.

I now proceed to relate the circumstances which occurred from the time of our arrival to that of our departure.

At the end of the foregoing chapter I mentioned that we steered about four o'clock in the afternoon, in company with a Japanese boat, towards Nangasaky, and anchored about half past five at the entrance of the harbour. The same evening about ten o'clock we received the visit of several magistrates, or banjos, as they are called in Japan, from Nangasaky, who, without waiting for an invitation, walked at once into the cabin, and seated themselves on the carpet. Their servants placed a lanthorn in front of each of them, with a little box containing their smoking apparatus, and a vessel with coals to light their pipes, a very necessary article, in conse-

quence of the small size of the latter, which are emptied in four or five whiffs. The attendants of these great men consisted of about twenty persons, among whom were several *tolks*, or Japanese interpreters of the Dutch language, who questioned us very minutely upon the route we had taken since leaving Cronstadt; but particularly whether we had come through the straits of Corea, or along the east coast of Japan. They appeared pleased to learn that we had taken the latter course: and upon our departure from Japan we found that they were very jealous of the passage between Corea and the Japanese coast. The chief interpreter (whose name was Skiseyma) evinced some geographical knowledge, more at least than I expected to have met with from him. He knew that Teneriffe belonged to the Canary islands, and St. Catharine's to Brazil; yet I afterwards discovered, that he, as well as all the rest of his colleagues, were extremely ignorant of the geography of their own islands, or at all events pretended to be so. What, however, struck them very much, and they would scarcely give credit to, was, that our passage from Kamtschatka did not occupy more than a month. The Opperhoofd, or director of the Dutch factory, Myn Heer van Doeff, was also brought along with the banjos; but it was upwards of an hour before he was permitted to come on board. He had scarcely entered the cabin with his suite, consisting of his secretary, the two captains of the Dutch ships that were here, and a Baron Pabst, when they were all obliged to remain during several minutes in an inclined posture, which they were called upon to do, by a most insolent order from the interpreter: "*Myn Heer Opperhoofd, compliment voor de Opper Banjos!*" This submissive, and at the same time degrading attention, was not answered even by a nod. The compliments, as they are called, of the Dutch, are

something between the bows of the Europeans and Japanese, which last consist in throwing yourself flat on the ground, touching the earth with your head, and crouching backwards and forwards according as you may be spoken to by your superior. The Dutch would find great difficulty in casting themselves on the ground, owing to their clothes, and the pliability of the body required in these prostrations cannot be expected in people who are not brought up to it; but in order to imitate the Japanese customs as much as possible, the Dutchman must incline his body until it forms nearly the figure of a right angle; and what is much more difficult, he must remain in this position with his arms extended until he receives permission to stand again in his natural posture, which is not until after a lapse of some minutes. There must likewise be a difference in the compliments which the Dutch pay in Jeddo from those which we saw here; for we were told that previous to going there all persons belonging to the embassies receive instructions in bowing. The Japanese never ventured to propose this submission to us: upon their second visit, indeed, one of the interpreters, just after I had been addressed by the banjos, applied his hand gently to my back; but when this occasioned me to look earnestly at him, he withdrew, nor did they ever renew the attempt. About twelve o'clock they all retired, promising to return the next day and carry the ship higher up the harbour: about twenty vessels kept guard around her: their flags, upon which were painted the arms of the Prince of Fisen, shewing that they belonged to that prince, who, as we were informed, has an equal title with Prince Tschingodzin to the city of Nangasaky, and the surrounding country; and it was only the guards of these two princes, who relieved each other during our stay. The Prince of Omura must also have a share in

the city, his officers being frequently on guard at the ambassador's; but in the harbour, we saw neither the flag of the Prince of Fisen, nor of Tschingodzin.

The extraordinary respect with which the interpreters spoke to the banjos gave us at first a very high idea of the character of these magistrates, whose rank we afterwards learnt was very inconsiderable; and that nothing but a commission from the governor imparts to them a temporary elevation. Whenever an interpreter has any thing to translate, he cast himself on his hands and knees before the banjos; and in this attitude, with his head hanging down, he made a hissing noise two or three times with his mouth, as if he were inhaling the air that surrounded his master.* He then reported to the banjos, in a tone of voice scarcely audible, and mixed with repeated sighings, in short, broken sentences, the conversation which in Dutch had lasted several minutes. If a Japanese was addressed by a banjos he crouched to him, bowed his head to the ground, repeating constantly the monosyllable Eh! eh! intended to signify, "I understand." The banjos always conducted themselves with great dignity; they never laughed, but occasionally shewed their satisfaction by a smile. As they seemed to me in other respects to possess some manners, I was very much struck by an indecent practice common to them, and in which they never checked themselves, although they must have been well aware of its impropriety, even if their own feelings did not tell them so, as the Dutch interpreters have not the same custom.

* This hissing noise, made by drawing in the breath suddenly between the teeth, is a general compliment among the nobility.

The clothing of the banjos, as well as of the interpreters, consisted of a short upper garment with very wide sleeves, and under this a complete gown reaching quite down to their feet, and fastened round the neck, and very similar to the female dress in Europe, except in being much narrower from the hips downwards, so as to render it extremely difficult for them to walk; indeed they never walk but when they are absolutely compelled to do so. This is the usual dress of all the Japanese; and the only difference between the clothes of the rich and of the poor is, that those of the former are made of silk, while the latter are clad in coarse woollen stuffs: the upper garment is generally black, but there are some of different colours, and the lower dress is mostly of mixed colours. Every one has his family arms worked into his clothes in different places, about the size of a half dollar, a practice usual to both sexes; and in this manner any person may be recognized, and the family to which he belongs easily ascertained. A young lady wears her father's arms until after her marriage, when she assumes those of her husband. The greatest mark of honour which a prince or a governor can confer upon any one, is to give him a cloak with his arms upon it, the person having such a one wearing his own arms upon his under dress; and the ambassador was frequently told how supreme a happiness would be conferred upon him, if the emperor was to present him with a garment bearing the imperial arms. The arms were generally worked into clothes made of Japanese stuffs, but they were sewed upon those made of Chinese stuffs. In the winter the Japanese wear five or six dresses one over the other; but I have never seen any of them in a cloth dress, or in any kind of furs, although the weather is very raw in the months of January and February. It is singular that they have no notion of clothing their feet;

their stockings, which cover only half of their legs, are made of woollen stuffs sewed together, and instead of shoes they merely wear soles made of straw, which they fasten to the great toe by a kind of loop; and which, as their floors are always covered with wadded mats, they take off the moment they enter a room. The upper classes are scarcely sensible of the want of better shoes, as they seldom walk, and sit throughout the day with their feet bent under them; but the poorer sort, who constitute perhaps nine-tenths of the whole population, must suffer very much from it during the winter months. The Japanese exposes his head in a similar manner; although he is half shorn he never strives to protect it by a parasol against the heat of twenty-five degrees, and he is equally regardless of one or two degrees of cold, and the most piercing north winds which prevail during the winter; nor do they ever use an umbrella in rainy weather. The hair is rubbed over with a very strong pomatum, by which it obtains a great polish, and is tied together on the top of the head, and made to terminate in a very small knot, forming a crooked line in front quite close to the forehead. The toilet of a Japanese must occupy a very considerable time, as they not only anoint and comb their hair, but shave their heads daily; this latter operation they never perform on their beards, but pluck out the hair with small pincers, that it may not grow again, and these and a metal looking-glass occupy the chief place in the pocket-book of every Japanese. They cannot be denied a great cleanliness of person, although they make no use of linen, without which we have no notion of such a quality; but this, as far as we saw, appears to be the ruling passion of the Japanese of every rank.

About four o'clock the next afternoon, a present, consisting of fish, rice, and fowls, was brought on board from the governor. The boat announced to us the visit of several principal characters, and we shortly after perceived a large vessel adorned with flags, which, accompanied by several others, was towed towards the ship amidst the continual sound of kettle drums. According to the report of the interpreters, they were the principal secretary to the governor, the treasurer, and the *otona* or burgomaster of the city. The first seated themselves on the carpet, the latter on a chair on the right hand; but the Dutchmen who accompanied them, were to us the most agreeable part of the company; the conversation in particular of Captain Musquetier, who spoke English, French, and German, and appeared a very well informed officer, was extremely interesting to us, and it was with the greatest regret that I found myself prevented from keeping up an acquaintance with him, owing to the jealousy and suspicion of the Japanese.

The object of this visit of the *banjos* was to carry away the powder and arms belonging to the ship, and to remove her to the west side of Papienberg. They refused to carry her to the east side under the pretext, that the five Chinese junks which lay there, occupied the whole road. At midnight we weighed anchor, and were towed by about sixty boats to our new anchorage, which was nearly two miles and a half off. We could not but admire the order with which this was effected: the flotilla divided itself into five lines of twelve or eighteen boats each, which kept their places so regularly, that they were not once broken; and notwithstanding the foul wind we advanced at the rate of two miles an hour. About four in the

morning we anchored in twenty-five fathoms water; and were instantly surrounded by thirty-two guard-boats, which formed a circle round the ship, that no vessel was allowed to break through; and as the west side of Papenberg lies very much exposed, they were frequently compelled, whenever the wind freshened, to quit their post, which, however, they hastened to resume the moment the weather was again a little fair: and this has been the case two or three times a day. Some of these vessels carried the imperial flag, white, blue, white; but the greater part of them bore that of Fisino Kama-sama, or the Prince of Fisen; the large boats, which had a flush deck, and were covered with blue cloth, were distinguished by two peaks, the aftermost one being the mark of an officer. Besides these thirty-two boats, there were three others which remained in the vicinity of the ship, to receive our orders.

On the 12th October at four in the morning, the Chinese fleet got under sail. The construction of these junks is well known, and needs no description here; and we were witnesses to the unskilfulness and difficulty with which they hoisted their sails. The whole crew of the ship, apparently consisting of a hundred men, were at work for upwards of two hours, hoisting, with the most horrible noise, a single sail, an operation which they performed by means of a windlass. As soon as they got out of the bay, they set their topsails, which are of sailcloth; the three lower sails being, as is well known, made of mats. With this miserable apparatus, they can only sail during the most favorable monsoons; the most trifling storm that springs up against them, exposing them to the greatest danger. About noon the wind veered from N. E. to N. N. W., and although this was still fair

for them, they were obliged to return to their former anchorage. This happened to them a second time, but the third time the wind continued in the north-east, and they succeeded in getting to sea.

On the 11th, 13th, and 15th October, according to our reckoning, (which is one day later,) the Japanese celebrated a feast, which the Dutch interpreters called Kermes. It certainly is a very wise regulation of these people, not to continue their religious and national feasts on many successive days, but to have always a working day between them. By these means they are not much interrupted, and no work is discontinued. Feasts that last for several days, are equally injurious to the health and morals of the people, and are besides attended with a great loss of time; and a life of debauchery continued for three or four days, requires at least as many, and perhaps more, to restore that repose and tranquillity requisite in works that demand a clear and unembarrassed genius. The Japanese have no Sundays, and only very few holidays, of which these kermes and the feasts of the new year, are the principal ones.

On the 16th October, at about eleven o'clock, a banjos arrived with nearly an hundred tow-boats, to tow the ship to the east side of Papenberg, where we anchored at one o'clock in eighteen fathoms water, over a ground of thin clay. A small anchor was carried out to the south-east, that side being, according to the Japanese, safer than the north-west. We requested in vain to be towed into the inner harbour, in order to repair the ship which had suffered during the typhon, and, even before that, had sprung a leak. This was refused because

no permission had hitherto been received from Jeddo; and another most absurd reason was assigned, and which really seemed intended to ridicule us, viz. that a ship of war, having so great a man as an ambassador on board, could not lie in the same road with merchant-ships, such as were those of the Dutch; but that so soon as the latter should sail, it was intended that we should occupy their places.

On the 21st October an interpreter informed us, on the part of the governor, that as the two Dutch ships would proceed the next morning to Papenberg, we should not, upon any account, send a boat on board of them—at the same time he warned us not to return the Dutch salute, which was in honour of the imperial flag, not as a compliment to us. This caution was the more absurd as the governor had before ordered all our powder to be taken from us; and we had not an ounce on board. Besides it would have been utterly impossible for us to have returned the salute even if we had had the vanity to assume it to ourselves; for it consisted of at least 400 shots, and lasted, with short intervals, during six hours. The two ships anchored about a mile to the north-east of us; and the governor now sent us word, that as soon as the Dutch ships should put to sea he would allow us to occupy their place; but that we could not be admitted in the inner harbour, because no order to that effect had as yet been received from Jeddo. This promise he kept very punctually: the Dutch ships sailed on the 8th November, and on the 9th two banjos with their tow-boats came to us, and about six in the evening we anchored between the imperial batteries, which are on the south-east and north-west side of the entrance, in thirteen fathoms water, over

a bottom of green ooze. Our course was N. E. by E. 4 E., the depth decreasing from eighteen to thirteen fathoms: a second anchor was carried out to the S. E. Our distance from the town was two miles.

I was extremely anxious to repair the injury the ship had received, as soon as possible; but as permission had not yet arrived for the ambassador to land with the presents, and the ship consequently could not be unloaded, the governor sent us a Chinese junk, on board of which he might remove with the presents, until the order from Jeddo, concerning his residence on shore, should be received. As the Chinese make use of wooden anchors we gave him one of our's for the greater security; but the cabin of the junk was so extremely bad that the ambassador would not consent to remove on board of her, declaring moreover that he must remain with the presents. The Chinese ship was therefore conveyed back to Nangasaky, and every thing remained as at first: we had however an opportunity of taking a nearer survey of this monster of naval architecture.

I now had the ship completely unrigged and sent the masts and yards to Kibatsch, which place we had not lost, though we had shifted our birth.

On the 24th November the ambassador was informed that, although the courier had not yet arrived from Jeddo, the governor was disposed to give him a house on shore at his own risk; demanding, however, that the soldiers should be left behind. That he did not consent to this I have already men-

tioned; the governor, at the same time, promised, that on the arrival of the courier from Jeddo, the ambassador should, without fail, have a larger building appropriated to him, although the house in Megasaky, of which the interpreters brought a plan, appeared to be very roomy.

It is extremely difficult to say what could induce the governors,* in whose conduct there was always an appearance of dignity and consequence, and who latterly gave us several proofs of their good disposition, to send us invariably false information. The promises, for instance, which they made us on our arrival, were so many empty words; and we learnt afterwards, what indeed we might have found in Kämpfer and Thunberg, that an answer may be received from Jeddo in thirty days, and that there have been examples of the journey there and back again to Nangasaky having been performed in twenty-one days. This the interpreters would never allow; but asserted that even when the roads were good, three months were requisite to go and return; and that at this time of the year a much longer period was necessary. They also told us that all the governor had acceded to was at his own risk; it was not, however, very probable that he should give up a house in the city to the ambassador, and large warehouses for the presents, without an express order to do so; and his anxious behaviour when he took upon himself to offer us a place in Kibatsch for a walk, sufficiently demonstrated his confined authority.

* Nangasaky has two governors, who relieve each other every six months. The second arrived a few days after we had reached Nangasaky, but the other was obliged to remain there, because we had come during the time of his authority.

Our arrival at Nangasaky was too important an event in Japan, for the court not to be informed of the most trifling circumstances concerning us; and I am convinced that after each visit of the interpreters to the ship, a courier was dispatched with an account of every word and gesture, which frequently were of a nature to increase the suspicion and injure the pride of this jealous and haughty people. We afterwards learned that the *Cubo*, or western Emperor, could determine nothing on this momentous occasion without consulting the *Dairy*; and that he had even sent an embassy concerning us, to ascertain the wishes of this important personage, whom the Japanese, although he has no executive authority, hold in the greatest veneration on account of his religious character. It is therefore very probable that the governor of Nangasaky received his instructions from Miaco, the residence of the *Dairy*, and not from Jeddo; and I am persuaded that the disputed point, with regard to the soldiers, could not be settled by the governor alone. A period of twenty-one days elapsed from the time that the question, with regard to them, was first agitated, until the entrance of the ambassador into Megasaky, in which time an answer might have been received from Jeddo, and consequently much sooner from Miaco.

On the 17th December the ambassador was conveyed on shore, for which purpose the Prince of Fisen sent his own boat, a vessel exceeding in size (being 120 feet long) and magnificence every thing that I had hitherto seen. The walls and ceilings of the numerous cabins were all varnished over in the handsomest manner; and the stairs, which were of red wood, were polished so highly as to have the appearance of lacker. The

decks were covered with mats and the most costly carpets; the curtains to the doors were of rich stuffs; and the whole boat was hung with double rows of silks of different colours. As the ambassador stepped on board, the Russian imperial standard was hoisted and waved together with the flag of the Prince of Fisen; and his guard, which accompanied him on board the vessel, took their place on the upper deck close to the standard. The imperial fortresses were ornamented with new flags and curtains, and manned by a number of Japanese troops in their best clothes: an innumerable fleet of boats surrounding the vessel and accompanying the ambassador to the city. So far the ceremony, attending his entrance, was worthy the representative of a powerful monarch; but he had no sooner landed, and entered his dwelling, than the doors were locked on both sides, and the keys sent, at sunset, to the governor.

The day after the ambassador's departure, two banjos came on board with a vast number of boats to receive the presents. Two boats were lashed together, in order to disembark the large mirror, having a platform of strong planks laid across them covered with mats, upon the top of which was spread, certainly very unnecessarily, a red cloth. I endeavoured to persuade them, but in vain, to take this valuable covering away, as the mirror was by no means better placed on account of it; but the respect in which every thing that has the least connection with the Emperor, is held in Japan, was too great to admit of any economical considerations. A guard of soldiers got instantly into the boat, ranging themselves by the side of the mirror.

The following anecdotes serve to characterize this nation, or rather the spirit of the Japanese government. I inquired of one of the interpreters in what manner it was proposed to convey this large mirror to Jeddo, who told me that it would be carried there; upon which I replied that this did not appear practicable, as the distance was so great, and every mirror would require at least sixty men to relieve one another every half mile. His answer was, that nothing was impossible to the Emperor of Japan; and as a proof of his assertion he related to me, that about two years before, the Emperor of China had presented the Emperor of Japan with a live elephant, which had been carried from Nangasaky to Jeddo. The following example, which I learnt upon another occasion from one of the interpreters, and which he did not mention to me in proof of the power of his sovereign, but merely as a fact which had recently occurred, will sufficiently demonstrate with what punctuality the emperor's orders are executed, without any consideration to even apparently the most insuperable obstacles. A Chinese junk was driven on shore in a gale of wind, upon the east coast of Japan, in the bay of Owary, on which occasion she lost her masts and rudder. As, according to an ancient regulation, every foreign ship which may touch upon the coast of Japan, either accidentally, or from being driven upon it in a gale, must immediately be brought to Nangasaky, this ship also, although in a very bad condition, was ordered to be carried round. In Japan such a thing cannot be effected except by means of towing boats, and several hundreds of these were immediately sent to tow the ship from the bay of Owary to that of Osacca: a voyage during which it was not unlikely, that on the first high wind, which are very frequent upon this coast, both ship and

boats would go to the bottom. From the bay of Osacca the navigation was indeed not so dangerous, as the passage was not in the open sea, but between the islands of Nipon and Sikokf and Kiusiu. This towing voyage, which lasted fourteen months, must have been very expensive, one hundred boats, and consequently six hundred men being kept in continual employment. The natural, as well as least expensive method would have been to have broken up the ship, or to have burnt and paid for her, sending the cargo to the Chinese at Nangasaky; but this was contrary to the laws of the land.

On the 22d December the ambassador was informed that a courier had arrived from Jeddo with the order for the Nadeshda to be carried into the inner harbour that she might be repaired. And about ten o'clock the next morning, although the wind blew pretty strong from the N. E. and it rained very hard, two banjos came with their flotilla and towed the ship to the bay, where we brought-to about a quarter of a mile from the land between the Dutch Dezima and Megasaky, and cast anchor in five fathoms water, with a second anchor carried out to the N. E. On this same day two Chinese junks arrived, and four others some days after. A seventh had been stranded during the gales on the Gotto islands, but the crew was all saved, and after a few weeks arrived in Japanese boats at Nangasaky.

The following is the intelligence, though indeed very incomplete, which I have been able to collect with regard to the Chinese trade.

Twelve ships are permitted to come to Nangasaky annually

from Ningpo, (or, as the Japanese pronounce it, Simfo,) five of which arrive in June and sail in October, the other seven in December, and return in March or April. Their cargo consists chiefly of sugar, ivory, tin plates, lead, silk stuffs and tea. That this last article is among the imports from China I did not indeed learn from the interpreters; but upon our departure they gave us the choice between Chinese and Japanese tea. We chose Japanese, and found it much worse than the other; and I believe that what is said of the excellence of the Japanese tea is very much exaggerated. A small box full, which the governor presented to the ambassador shortly after our arrival, and some that the officers of the embassy drank at an audience in the governor's house, were very inferior to the better kinds of Chinese tea.* The Chinese exports from Japan consist of copper, camphor, lacquered wares, umbrellas, but particularly the dye-fish, which is used as a medicine in China; besides these are a kind of sea plant, and large dried muscles, which last, known in Japan by the name of *Awaby*, are among their provisions, and are considered in China as a great delicacy. We ourselves thought them no bad food; and they may very well form a part of a ship's provision, as they will keep during several years. Although from the number of Chinese junks it should appear that their cargoes are very considerable, a junk not yielding much in size to a ship of four hundred tons; yet I believe that two ships of five hundred tons would be able to stow away easily what is conveyed in all the twelve. A junk is unloaded in the course of twelve hours; but this is done with a total want of order, the cargo consisting of small bags and boxes

* The Japanese only drink green, the Chinese on the contrary always black tea.

being thrown out of the ship without any regard either for the goods themselves or the boats destined to receive them. The rigging of one of these junks consists of little else than a few shrouds, nor have they the means of lowering or hoisting into the vessel, any articles of weight, with the necessary precaution. Another cause of this uncommon negligence in unloading them is, that the Chinese themselves are not present; for on the day after their arrival the captain and the whole crew are carried to the factory, and the Japanese take immediate possession of the vessel; nor are they allowed to return to it until a few days before their departure. As soon as the ship is unloaded, they take the opportunity of the first new or full moon, when the tides are lofty, to drag it on shore where it remains high and dry during the ebb. Their construction is of such a nature as to receive but little injury from this treatment, and their unfriendly hosts would probably not give themselves much concern about any accidents they might sustain. Besides these twelve ships which arrive here annually, there are two others left constantly in pledge; and the easy manner in which they disposed of one of them for our use, shews how much the Japanese consider them as their own property. We had another proof of the little consideration shown to the Chinese; for as the warehouses which surrounded the governor's house were not sufficient to contain all the empty water casks belonging to the ship, the Japanese immediately made room for us in two warehouses belonging to the former in the neighbourhood of Megasaky!

During the whole time of our stay here, we never witnessed the arrival of a single ship, either from Corea or the Likeo

islands, notwithstanding their vicinity; and all intercourse between these countries and Japan is said to have ceased for some time past; a circumstance that was mentioned in the letters which were delivered to the ambassador upon his departure. It would be very advantageous to any European nation that might be allowed to enjoy the carrying trade between Ningpo and Nangasaky. The distance is not above ten degrees in longitude; and as the latter place is well to the eastward of the former, the voyage is practicable in either monsoon, and cannot exceed at the most four days.

On the 25th December the ship was quite unloaded, even to the ballast, of which we had about two hundred ship tons on board. We now began to repair her, and the leak was found, as I expected it, towards the head of the ship. To my great satisfaction, however, I perceived that the remaining planks were all in a most admirable condition. The copper throughout was very bad, and I should have been glad to have availed myself of the opportunity of sheathing her with Japanese copper as low as it could be done without keelhauling her; which, owing to the muddy shore here, would be utterly impossible. As the governor had received orders from Jeddo to furnish every thing that was required towards the repairs of the ship, he offered to send to Miaco for sheets of copper for me, for that which is to be had in Nangasaky is very thin, and by no means proper to cover a ship's bottom. Of this latter, however, we obtained five hundred pieces for the use of our barges and long boat. The ambassador took upon himself to order this copper upon his journey to Jeddo: and the Japanese who knew, already at that time, that the embassy would not proceed there,

the arrival of a nobleman at Nangasaky having been announced, were not a little rejoiced to find themselves relieved of this trouble.

On the 14th January, 1805, there was a total eclipse of the moon, of which we were prevented by a dark cloud from witnessing the commencement; we, however, distinguished the darkening of several spots, as well as the re-appearance of the moon out of the shade. Dr. Horner made use of one of Dolland's astronomical telescopes, and I had one of Ramsden's terrestrial ones of about three feet in length. This eclipse could not influence our determination of the geographical longitude of Nangasaky, which had been much more correctly ascertained by a number of lunar observations, and by the eclipse of one or two stars, than it could be done with our imperfect means of observing it. The Japanese knew that such an eclipse would occur on this day, though the time of its commencement was not stated in their Almanack. I took pains to collect some accounts of the knowledge the Japanese possess of astronomy, but they are too unsatisfactory to be mentioned here; and it is very improbable that any great progress should be made in a science that requires some exertion of the mind, in a country where the best informed, which the interpreters undoubtedly are, have no notion of the geographical latitude and longitude of any place. According to their report, (and we may perhaps believe them in this instance, as it is so much beyond their ability to have invented such a story,) there are in the north of Japan, in a town at no great distance from Jeddo, people who inhabit temples and are called *Issis*, and who possess the art of foretelling eclipses of the sun and

moon. Interesting as it would have been to have acquired some information concerning these Issis, the few possessors of astronomical knowledge among so many millions of people, this was altogether impracticable from an ignorant interpreter. There are no written accounts of the astronomical knowledge of the Japanese, or whether they have made even the same little progress as their neighbours the Chinese, among whose monarchs there have been some who possessed a taste for this science and cultivated it. Had the ambassador obtained permission to travel to Jeddo, Dr. Horner, whose intention it was to have accompanied him, and to have taken an astronomical apparatus with him, might certainly have been able to procure some important information upon the subject in the neighbourhood of this temple of Urania. From Thunberg's statement, there are among the physicians of Jeddo persons who have a taste for scientific acquirements, and he must certainly have met with some among them capable of giving information on this head. The predictions of the eclipses of the sun and moon by the Issis, are inserted in the calendars, of which there are two kinds, one very complete, for the rich, and another, an abbreviation, for the poorer classes, published annually in Jeddo.

On the 16th January I was sent for in a great hurry to the ambassador's, where I found two banjos with several interpreters and assistants, on account of an attempt by one of the Japanese whom we had brought with us from Europe, to put an end to his existence, which, however, had been perceived soon enough to prevent the execution of his purpose. Dr. Langsdorff, who resided in the ambassador's house, immediately proceeded to stanch the blood, the man having cut

his throat with a razor, but was prevented by the Japanese guard, the governor not having been informed of it; and the patient was obliged to lie bleeding until the arrival of the banjos who were sent for. Neither Dr. Espenberg nor Dr. Langsdorff were even then allowed to assist him; but he was delivered over to a Japanese surgeon and a doctor:* fortunately the wound was not found dangerous.

The governor immediately upon our arrival had requested the ambassador to give him up the four Japanese, which he declined, intending to present them himself to the emperor. A few weeks later this request was repeated on the part of the governor, and met with the same reception. Some time after the ambassador applied to the governor to take these Japanese off his hands, but the answer he received was, that as he would not give them up on the two applications that had been made for them, he might now keep them himself; but he promised to send a courier to Jeddo for instructions how to act. No answer came from thence, and it was only on the day of our departure that they quitted the ambassador's house. These unfortunate wretches saw their country after a tedious voyage of fourteen months once more, but were then obliged to pass seven months in a state of confinement, after which it was even doubtful whether they would be permitted to return to their families, though this had been the only motive that induced them to quit the careless independent life they passed

* In Japan a doctor is distinguished from a surgeon; the first having his head entirely shaved, and the other entirely covered with hair. The Japanese generally have their heads half shaved.

in Russia. The precise reason for this poor creature's making an attempt on his life is not easy to determine, though a Japanese can never want one to wish himself well out of the world. It might have been despair at having returned to his country without being able to join his family; or a report might have reached him that the fate of those, whom Laxmann in 1792 had brought back to Japan, had been eternal confinement, without the smallest intercourse with their families. There was still another motive adduced, which, if it be true, may justify the harsh opinion which I expressed of the Japanese character in the fifth chapter. It was said that shortly after our arrival in Nangasaky he had delivered a written paper to the banjos, in which he not only complained of the cruel treatment his countrymen experienced in Russia, but described the Russians as the most bigotted of Christians, adding that several of them had been forced to embrace that religion, and that the object of this voyage was chiefly to make an attempt to introduce it into Japan. Nothing but the greatest wickedness could have excited this man to so infamous an action, as he could not be led to it from a spirit of revenge, for he, as well as all his countrymen, were received in Russia with a most exemplary kindness, obtained presents from the emperor upon their departure, and were treated on board the ship with every attention. This paper had, however, no effect; and partly despair of having failed in his purpose, partly a consciousness of his diabolical conduct, might perhaps have induced him to make an attempt on his life. After his wound had healed, he was frequently heard to say that the Russians were very good people, but himself a very bad man; and that he wished his life might soon have an end.

On the 19th February the ambassador received an official notice that the emperor had sent a person, attended by eight nobles, to Nangasaky, with full powers to treat with him. The interpreters did not exactly tell him that he would not now have any occasion to travel to Jeddo, yet this was easily to be inferred. The person whom the emperor had sent was of the highest rank, and, according to the expression made use of by the interpreters, was permitted to see the emperor's feet, though never to exalt his looks higher; (an honour which even the governor of Nangasaky could not boast;) and it was not to be supposed that so great a character would be sent merely to accompany the ambassador to Jeddo. A visit of the interpreters had sufficiently apprised us of the earnest wish of the Japanese government for our departure in the beginning of April. On the 27th February they came on board, to inquire in the name of the governor after our health, and from the questions they put to me, and which I heard with great pleasure, it was easy to perceive that their chief object was to know in how short a time the ship would be made ready for sea. Such a hint was not to be neglected, and I therefore began to get her in readiness, and had no cause to complain of any delay on the part of the Japanese in providing us immediately with all that we stood in need of.

It was only, however, on the 12th March that Skeyseima, the chief interpreter, acquainted the ambassador that he would not be permitted to travel to Jeddo; and that the Japanese plenipotentiary would arrive in ten or fifteen days in Nangasaky, after which the ship must return to Kamtschatka, as soon as she could possibly be fitted for sea. The interpreter farther

informed us, that we should not be allowed to purchase the least thing in Japan, but that the emperor had given orders to supply the ship with all that was necessary, as well as with provisions for two months, free of any charge to us.

On the 31st March, or 1st April, according to our reckoning, a feast was celebrated in Nangasaky, called *Mussume Matzury*, the chief character of which is that parents, on this occasion, present their children with dolls. Unimportant as the object of this holiday appeared, it must nevertheless be of great consequence in Japan, two days being devoted to these childish entertainments, and we were requested not to suffer the carpenters, employed upon the boats on shore, to work during its celebration.

On the 30th March, at about eleven in the forenoon, the plenipotentiary arrived from Jeddo. The negotiations with respect to the ceremonies of the audience, which were conducted with great warmth on both sides, commenced on the 3d April, when it was concluded that the ambassador should pay the representative of the Japanese emperor, an European and not a Japanese compliment. This latter, indeed, is of so debasing a nature, that even the very lowest of Europeans could not submit to it; but he was obliged to appear without his sword or shoes, nor would they allow him a chair, or any kind of European seat, but reduced him to the necessity of sitting in front of the governor and the plenipotentiary, on the floor, with his feet tucked under him. an attitude by no means the most convenient. He was allowed for his own use a

norimon or sedan chair, but the officers who attended him were obliged to proceed on foot.

On the 4th April he had his first audience, to which he was conveyed in a large boat adorned with flags and curtains. His suit consisted of five persons, Major Frederici, Captain Feodoroff, Lieutenant Koscheleff, Dr. Langsdorff, and Counselor Fossé, besides a serjeant who carried the standard; and he landed at a place to the north of Dezima, which the interpreters called *Mussel Trapp*. On this occasion, merely an exchange of compliments took place, and a few insignificant questions were put to him. The second audience was conducted with the same ceremonies, and here the negotiation terminated; the necessary documents being delivered into his hands, which contained an order that no Russian ship should again come to Japan; and the presents, and even the letter from the Emperor of Russia were all refused. Should any Japanese hereafter be cast upon the coast of Russia, they were to be delivered over to the Dutch, who would send them by the way of Batavia to Nangasaky. Farther; we were forbidden from making any presents,* or purchasing any thing for money, as well as from visiting, or receiving the visit of the Dutch factor. On the other hand it was declared, that the repairs of the ship and the supply of provisions, were taken into the imperial account; that she should be provided with every thing for two months,

* After many repeated intreaties and representations, the ambassador was at length allowed to give seven different articles to seven interpreters. These were a mirror, a piece of cloth, a glass lantern, a pair of girandoles, a pair of marble tables, and a marble ewer.

and that the emperor had sent 2000 sacks of salt, each weighing 30 pounds, and 100 sacks of rice, each of 150 pounds weight, besides 2000 pieces of capock or silk wadding, the former as a present for the crew, and the latter for the officers. The reasons assigned by the plenipotentiary for rejecting the presents were, that the Emperor of Japan would be obliged to make a present in return to the Emperor of Russia, and send an ambassador for this purpose to St. Petersburg, and that it was contrary to the laws of the empire for any Japanese to quit his country.

This then was the result of an embassy, which had raised such great expectations. We gained no new advantages, but even lost those we had possessed, namely, the written permission which Laxmann had procured for us to visit Nangasaky. All communication is now at an end between Japan and Russia, unless some great change should take place in the ministry of Jeddo, or indeed in the government itself, and this is perhaps not to be expected, although the interpreters flattered the ambassador with assurances that this refusal had created a great sensation throughout Japan, but particularly in the cities of Miaco and Nangasaky;* but I am pretty well convinced that the Russian trade will not suffer much in consequence of it.

On the 16th April, the ambassador had his last audience of the plenipotentiary; immediately after which, they began to

* By what Lieut. Chwostoff, who visited the northern coast of Jesso in the years 1806 and 1807, learned from the Japanese, a revolution actually did take place in Jeddo, for which the reason assigned was the dismissal of the Russian embassy.

bring the cannon, anchors, cables, and provisions, on board. The satisfaction which the prospect of soon quitting Japan occasioned to the ship's company, was evinced in their activity, and the working sixteen hours a-day, to get the ship in readiness; but without the assistance of the Japanese and their boats, it would have been impossible for us to have been ready to sail by the 16th April.

CHAPTER XIII.

DESCRIPTION OF THE HARBOUR OF NANGASAKY.

First Discovery of Japan by the Europeans—Attempts made by different Nations to form a commercial Intercourse with the Japanese—Examination of the hitherto determined geographical Situation of Nangasaky—Difficulties of taking an exact Plan of the Bay—Description of this, and of the Islands within it—Directions for entering and sailing out of it—Measures of Precaution—Monthly Observation of the Weather from October to April.

I SHALL preface this chapter, which I intend to devote chiefly to a description of the harbour of Nangasaky, by a short sketch of the earliest knowledge the Europeans had of the Japanese islands, which perhaps may not be considered as misplaced here.

It is now a mere matter of conjecture what may have been the first accounts received in Europe of Japan; but we are probably indebted for the earliest knowledge of the existence of this country to the celebrated travellers Rubruquis and Marco Polo.* It appears certain, that the discovery of Japan happened accidentally, about the middle of the sixteenth century. Fernando Mendez Pinto, a Portuguese, who undertook a voyage on board a Chinese junk, (commanded by the then celebrated pirate Samipochieva,) from Macao to the Likeo islands, was wrecked

* They both undertook their long voyages about the middle of the thirteenth century.

in 1542 upon the coast of this kingdom.* Three other Portuguese, who pretend to have touched that same year, in a Portuguese ship, upon the coast of Satzuma, dispute, indeed, with Pinto the honour of the first discovery; but neither the year of the discovery, nor the nation through which it was effected, is changed by this dispute. The Spaniards soon after began to visit Japan, but their connections were of very short duration; although the vicinity of the Philippines promised an advantageous commerce between these two rich groups of islands. Nor was the first visit of the Spaniards in Japan occasioned by any commercial projects, but, like that of the Portuguese, owing to a shipwreck. In the year 1609, the governor of Manilla, on his voyage from New Spain, was wrecked upon the Japanese coast, in latitude $35^{\circ} 50'$, and the emperor sent him, with all his people, to Acapulco, on board of one of the ships built by an Englishman of the name of Adams, of whom we shall presently make farther mention. This accident was followed by an embassy, which the Spaniards sent, with a number of presents, to the Emperor of Japan, in the year 1611;† but at the time of the extirpation of the Christians from Japan, they, as well as the Portuguese, were prohibited from ever touching at these islands; nor have they since attempted to renew an intercourse, which must have proved equally advantageous to both parties. The Dutch, who, by means of their free constitution and an adventurous spirit of trade, had become rich and powerful, could not but wish to participate in the trade with Japan, although at that time

* Histoire de Japon, par Charlevoix, 1754. Paris, in 12mo. 21 tom. p. 4.

† Entick's Naval History, in folio, p. 899

unable to carry it on with the same advantage as the Spaniards and Portugueze, as they then had no possessions in India. An accident favoured their intentions: in the year 1600, a Dutch ship, belonging to a squadron of five vessels, which sailed in 1598 from the Texel for the East Indies, under the command of Admirals Mahu and Simon de Cordes, was cast away on the east coast of Japan. William Adams, an Englishman, was the chief pilot on board of this ship, and to him the Dutch are indebted for their trade with Japan. The whole squadron was lost in its passage through the straits of Magellan, and in the South Sea, with the sole exception of the vessel that Adams steered; and this, on the 19th April, 1600, ran into the harbour of Bungo, in $35^{\circ} 30'$. Adams had the good fortune to please the Emperor of Japan, who loaded him with presents, but would not permit him to return to his country. The account he sent to the Dutch in Batavia of his residence in Japan, and of the possibility of opening a commerce between the two countries, induced the Dutch East India Company, in 1609, to send a ship there, and through the means of Adams, the emperor's favourite, the trade immediately commenced; and in 1613 the Dutch were allowed to establish a factory at Firando.* They are hitherto the only people who have succeeded in retaining the favour of the Japanese; that is to say, they are permitted, under very mortifying restrictions, to carry on a

* Entick's *Naval History*, in folio, p. 389—392. In the computation of time Entick has made an error of about twelve years. Admiral Mahu's fleet, according to him, sailed about the year 1586, and entered Bungo in 1588. See also, Burney's *Chronological History of the Discoveries in the South Sea*, Vol. XXI. p. 186—198, and Harris's *Collection of Voyages*, Vol. I. p. 256, of the edition of 1600.

trade between Batavia and Japan, consisting in their sending yearly only two small ships. In 1641, they were expelled from Firando and confined to Dezima; three years after the Portugueze, not without their active co-operation, had been compelled entirely to abandon their trade with Japan. The English obtained, nearly at the same time as the Dutch, namely, in the year 1613, by means of their countryman Adams, the permission to establish a factory in the island of Firando; but this trade was very soon after abandoned, although they were well received in the country, and were permitted to prosecute their intercourse on the most advantageous footing.* The motives which induced the English to quit Japan are not known: they were certainly not driven away, otherwise this circumstance would undoubtedly have been published to the world by the Dutch, who were still suffered to remain; but since that period, they have frequently endeavoured to resume their commerce with the Japanese, but always without effect. In 1637, four ships, under the command of Admiral Lord Woddel, arrived at Nangasaky from Macao, where they had been refused admittance, but without meeting here a better reception.† In 1675, another English ship arrived at Nangasaky, but was sent away under the pretext of the King of

* The letter from the Emperor of Japan to King James of England, and the treaty of commerce concluded by Captain John Saris with the Japanese government, in the name of the East India Company, are to be found in Entick's Naval History, p. 395.

† Voyage de Hagenaar aux Indes, dans le Recueil des Voyages qui ont servi à l'Etablissement et aux Progrès de la Compagnie des Indes Orientales, Tom. IX. p. 471. The expedition conducted by Lord Woddel, in 1637, is not mentioned in Entick's History.

England, Charles I., having married a Portuguese princess. In 1803, the same year as that in which we sailed from Russia, another attempt was made, but likewise without success: a company of English merchants in Calcutta had sent a ship, very richly laden, under the command of Captain Torey, to Nangasaky; but it was ordered to quit the Japanese coast in the space of twenty-four hours. The Americans, in the years 1801 and 1802, had failed in a similar project: the French have never ventured to attempt it.

Thus it appears, that during two centuries and a half, Japan has been visited by different nations of Europe, and that Nangasaky has been frequented annually during two hundred years. Notwithstanding this, no positive information has been obtained upon the latitude and longitude, and still less, has any plan been taken of this, which is one of the best harbours in the world, and which, in the hands of Europeans, might be made one of the most advantageous. Kämpfer, Charlevoix, and Thunberg, have stated the longitude and latitude of Nangasaky, but their determinations are all incorrect; and the plan of the harbour given by Kämpfer is extremely faulty. In the fourth volume of Dalrymple's admirable collection of Charts, are several plans of the harbour of Nangasaky, after English and Dutch manuscripts; but, with the exception of No. 27, which is a chart of the south-west coast of Japan, in which the latitude of Cape Nomo, the town of Nangasaky, and the entrance of the harbour are really given with great accuracy, considering its date, they are none of them better than that of Kämpfer. The most correct position of Nangasaky is, however, to be found in the General Chart of Barbié du Bocage, the geographer to

Dentrecasteaux's voyages, published by Labillardière, the naturalist to the expedition. We found but a very trifling and almost imperceptible difference, both in the latitude and longitude: but I believe that this concurrence is to be ascribed merely to chance; for before our time no astronomical observations were ever made at Nangasaky, except an observation of an eclipse of the moon in the year 1612. This was observed at the same time at Nangasaky and at Macao, and gave one hour as the meridian difference of these two cities. Now as the longitude of Macao is $113^{\circ} 37' 19''$,* it follows that that of Nangasaky must be $128^{\circ} 37' 19''$, which is only 14° different from the true longitude. I am not aware of any more recent astronomical observations at this place.

The observation of the moon's eclipse in 1612, is mentioned in the *Mémoires de l'Académie des Sciences à Paris*, tom. VII, seconde partie, p. 96, edition in 4to, 1729, where it is related in these words:

“ En l'année 1612 les Pères d'Aleni et Ureman observèrent une éclipse de lune à Macao le 8 Novembre,

Le commencement à - - - - - $8^h 30'$

La fin - - - - - $11^h 45'$

Le Père Charles Spinola, qui eut le bonheur d'être brûlé à petit feu dans le Japon pour la foi de Jesus Christ qu'il étoit allé y prêcher, observa à Nangasaky, capitale du Japon, le commencement de cette éclipse à $9^h 30'$.

* The reason why I have assumed $113^{\circ} 37' 19''$ as the longitude of Macao, will be seen in the 12th chapter of the next volume.

Donc la différence entre les meridiens de Macao et de Nangasaky est 1° , qui vaut 15° .

Donc la différence en longitude entre Paris et Nangasaky (la longitude de Macao étant $111^{\circ} 26'$) est $126^{\circ} 26'$."

Spinola's observation is incomplete, as he only gives the commencement of the eclipse. The longitude of Nangasaky could not therefore be calculated with perfect accuracy; but it is undoubtedly very wonderful that two hundred years ago, that of Macao should have been so correctly ascertained, as to vary only nine or ten minutes from the latest and best observations. In the year 1612, these same jesuits, Aleni and Ureman, determined with considerable precision the latitude of Macao at $22^{\circ} 23'$.

Captain Burney, who discusses the longitude of Nangasaky in his Chronological History of the discoveries in the South Sea, rejects the longitude deduced from Spinola's observation, and has determined it by another method, varying but very little from the true longitude, namely $130^{\circ} 06' E$. He has deduced it from the ascertained longitude of Tsus-sima, and the distance of this island from Nangasaky; and it appears that he has taken the mean of La Perouse's and Broughton's longitude of the north end of Tsus-sima, and of Kämpfer and Valentine's, as the ground of his meridian distance.

According to La Perouse, as quoted by Burney, the north point of Tsus is $129^{\circ} 37'$,*

* The north end of the island of Tsus, according to La Perouse's chart, is $127^{\circ} 37'$, or $129^{\circ} 37' E$. of Greenwich. In the first chapter of the second volume of my voyage, it will be seen that the longitude of Tsus-sima, according to La Perouse's own statement, must be $= 129^{\circ} 22'$.

DESCRIPTION OF THE HARBOUR OF NANGASAKY. 295

According to Broughton - - - 129° 30'

The mean is therefore - - - 129° 33' 30"

The meridian distance between Nangasaky and Tsus-sima is stated by Kämpfer to be 40',* and by Valentine 25', the mean of which is - - - 32' 30"

Consequently, $129^{\circ} 33' 30'' + 32' 30'' = 130^{\circ} 06' 00''$.

In the *Connaissance des Temps*, which generally contains the most correct determinations of latitude and longitude, there is an error of 13' in the latitude of Nangasaky; and that assigned by the above-mentioned Captain Torey, in 1803, approaches much nearer to the truth. By his observations, which were imparted to me at Canton by Captain M'Intosh, to whom so much credit is due on account of his hydrography of the East Indian and Chinese seas, the city of Nangasaky lies in latitude $32^{\circ} 45'$ and longitude $229^{\circ} 45'$ W. of Greenwich. This determination has, indeed, never been publicly known, although, of all the authorities which I have adduced, it is the only one that can be adopted as correct; being the latest, and by an Englishman, who never traverses the East Indian seas without a chronometer, and who is perfectly acquainted with the method of lunar observations. As Captain Torey only continued twenty-four hours in the bay of Nangasaky, no blame is due to him because his longitude differs nearly half a degree from ours, while his difference of latitude is extremely trifling.

Although Nangasaky may be closed for a long time against

* By our observation, the meridian distance between Tsus-sima and Nangasaky is 39'.

Europeans, it would be too much in the spirit of the Dutch merchants, were I to withhold the nautical remarks and observations which we made during our stay there. I therefore consider it as my duty to publish whatever seems likely to become useful, even though not till a remote period; and the object of our enlightened monarch, who instituted this voyage, would be very ill attained, if every thing of a philosophical nature that we were able to collect during the prosecution of it were not made public in the most circumstantial manner.

The entrance of the harbour of Nangasaky lies in latitude $32^{\circ} 43' 45''$ N. and longitude $230^{\circ} 15' 00''$ W. in the middle of the bay of Kiusiu, which is formed by Cape Nomo to the south, and Cape Seurote to the north. From Cape Gotto in $32^{\circ} 34' 50''$ and $231^{\circ} 16' 00''$, the entrance of the harbour bears E. by N. fifty-one miles. The distance from the easternmost of the Gotto islands is only thirty-three miles, and perhaps still less, from a chain of small rocky islands which stretch to the N. E. from the Gottoms and probably join to Cape Seurote, and seem, at this point at least, to render a passage impracticable; and which, according to the report of the Japanese, is only navigable for boats. Having correctly ascertained the entrance, no doubt can exist as to the course to be steered; but should the want of an observation occasion any uncertainty, the mountainous nature of this part of the coast renders Nangasaky very remarkable. The land at Cape Nomo and Cape Seurote is not particularly high, but Nangasaky, on the contrary, is surrounded by very lofty mountains, among which are a regular chain higher than the rest at the southern extremity, which lie rather E. by S. of the entrance. It is best to keep

as much as possible in the middle between the Gotto islands and Kiusiu, and to steer a north-east course until the parallel of the entrance, and then due east. In this direction the hill behind Nangasaky soon becomes visible, and is a certain mark even at a very considerable distance. When within about nine or ten miles of the entrance, a large tree is seen on the island of Iwo-sima, on the south side of it, and this tree, which is visible even at a greater distance than ten miles, being brought to bear S. E. 85° , is then in a line with the point of the above-mentioned hill. With these two very particular marks, it is impossible to miss the course to be pursued; but if, on making the land of Kiusiu, you steer to Cape Nomo, as we did, believing the entrance of Nangasaky to be twelve miles more south than we found it, and then along the coast, you are not only in danger, either in a calm or by the tides, which at the time of the full and new moon are very strong, of being driven too near the rocks, but might very easily mistake an entrance in latitude $32^{\circ} 40'$ for the true one, and which, though it really leads to Nangasaky, might prove dangerous, never having been explored.

Cape Nomo, the southern point of the bay of Nangasaky, lies in latitude $32^{\circ} 35' 10''$ and longitude $230^{\circ} 17' 30''$. This promontory consists of a hill, with a split or double summit, and at a little distance has the appearance of an island; and when near it is very remarkable by a large rock which lies in its front. Between Cape Nomo and the entrance into the harbour are a number of rocks and small rocky islands, one of which is of considerable height, and others, like the Papenberg in the bay of Nangasaky, are remarkable from being planted

with trees from the base entirely up to the summit. Behind the islands and the rocks is a bay, the south side of which is bounded mostly by a flat and very well cultivated country: farther inland it is more mountainous, the hills stretching in a north-west direction as far as Nangasaky, in large ranges adjoining each other, and planted with avenues and groups of trees. Behind Cape Nomo the coast assumes a south-east direction; and here there appears a large bay which, in the Japanese charts, is called Arima, but which we were unable to examine. The last point seen by us is in latitude $30^{\circ} 32'$ and longitude $230^{\circ} 11'$.

Cape Seurote bears N. W. $11^{\circ} 30'$ of Cape Nomo twenty-five miles; and from the entrance N. W. 30° , seventeen miles and a half, and is in latitude $32^{\circ} 58' 30''$ and longitude $230^{\circ} 25'$. The cape itself is not of an extraordinary height, and may be known by a hollow to the south-east, from which the land rises to the north, and is, on the whole, more mountainous than Nomo. Southward of Seurote are several islands of which the largest and nearest to the cape is called Natsima, and the most to the south Kitsima; but these, as well as the cape itself, we only saw on the 8th October, the day of our arrival, and on quitting our first anchorage on the 9th.

The harbour of Nangasaky may be divided into three parts; for it contains three different roads, which are all perfectly safe. The first without, to the westward of the island Papenberg; the second in the middle to the eastward of that island, and the third at the bottom of the harbour forms the inner road in front of the city. As we lay for a considerable time in all of them, I am enabled to describe them very circumstantially. The en-

france is formed to the southward by the north end of the island Iwo-sima, and to the northward by Cape Facunda,* which two points lie N. E. and S. W. 40° distant about two miles and one-third from each other. In the middle between them the depth is thirty-three fathoms, and with this water we anchored over a bottom of fine grey sand. In the direction of E. S. E. $\frac{1}{2}$ S. E. $\frac{1}{4}$ E. and E. (the course of the outer road) it gradually decreases, till you anchor in twenty-two or twenty-five fathoms over a bottom of thick green ooze covered with fine sand. This outer road, to the west of Papenberg, is completely sheltered against every wind except the north-west and west-north-west; but as this wind blows but seldom during the north-east monsoon, and never very strong, it is perfectly safe at this time of the year. The anchorage is excellent, and we had considerable trouble in weighing our anchor, after it had lain in the ground during eight days, in which time it had not blown at all fresh, nor was it weighed the second time without trouble, although we passed but one night here; so that unless a vessel intends to remain here any time, it will be found sufficient to cast out a kedge, instead of a second sheet anchor. Ours lay to the north in a depth of eighteen fathoms. This road is formed by the following islands: to the W. and S. W. is the lofty island Iwo-sima, which lies nearly north and south, and is one mile and a half in length: the hill which forms it is divided in the middle by a low valley, where there are some houses, and upon the top of the northern half of the island a large tree standing in an insulated situation, and visible at a considerable distance, marks the

* The northern cape, at the entrance, I have called, for want of another name, after the town of Facunda, which lies in an open bay not far from thence.

entrance to the harbour, and was of particular service to us in combining the plan of the harbour with the sea marks. In an almost north-east direction of the hill from the tree, is a valley with a considerable village, surrounded by a very fine wood; and in the same direction, about a quarter of a mile from the shore is a rock, which I believe is covered at high water. E. S. E. of the island of Iwo-sima is another, called Taka-sima, and these two are divided by a channel scarcely half a mile wide, but which must be entirely free from rocks, as a Chinese junk passed through it, and these vessels, being so badly manœuvred, require a very safe passage. Kajack-sima lies N. E. of Taka-sima, and they are probably only separated by a channel full of rocks, or may perhaps be connected together by a small neck of land, a circumstance we were unable to ascertain. At all events there is no passage, not even for the smallest boats, which makes it the more probable that these two islands are connected as they are laid down in the plan. To the north of Kajack-sima lie some rocks that bear the name of Kanda-sima; and farther to the north-east the small island Amiabur, which is about a mile and a half in circumference, and is separated from the former by a small channel scarcely a quarter of a mile across. On the north-east point of Amiabur stands a Japanese fort, that is to say a building hung round with striped cloth, but containing neither cannon nor musket. The Japanese interpreter stated that there are rocks below water in the vicinity of this island, which frequently tear the fisherman's nets, and hence the name of Amiabur arises, *amia* signifying a fishing net, and *bur* to tear or break in pieces. The islands Taka-sima, Kajack-sima, Kanda-sima and Amiabur surround the outer road from the S. W. to the S. E.: to the

E. at a distance of about two miles is the main land, to the N. E. Papenberg, and the island Kamino-sima to the N. ; this last is about two miles in circumference. From these another chain of rocks stretches to the W., between which there does not appear to be a passage even for the smallest craft, and Kamino-sima is surrounded by several reefs, and separated from the main, as well as from Papenberg, by a narrow channel only navigable for boats. On the east point of Kamino-sima there is another fort after the Japanese fashion, called Simbo. The following are the bearings from our anchorage in twenty-five fathoms in the outer road. The tree upon the island Iwo-sima bore S. W. 83° —Papenberg N. E. $76^{\circ} 30'$. The north end of Iwo-sima N. W. 85° . The bearings were nearly the same when we came to an anchor here in twenty-four fathoms at the time of our departure.

The middle road, or that to the eastward of Papenberg, is surrounded on all sides by the land, and is equally safe with the innermost one, to which I should prefer it, as its anchorage is better, though not equally good with that of the outer road. To the W. lies Papenberg, a small island scarcely half a mile in circumference, the highest of all those in this harbour, and particularly remarkable from its being planted on both sides with a row of trees from its base to the summit. By the Japanese it is called Takaboku-sima: the name of Papenberg being derived from the report, that during the extirpation of the Christians from Japan, the Catholic priests were thrown from the top of this mountain. To the S. W. lie the islands Amiabur, Kajack-sima and Taka-sima, and in a rather more southerly direction, the broad channel, open to the sea, but in

which, during the south-west storms the waves are broken by small islands and rocks lying as well without as within it, and on this account it is necessary to anchor rather nearer to Papenberg, in order to be perfectly secured. During the typhon, on the 1st October, in which the Dutch ships in the inner road were driven from their anchors, the Chinese junks lay secure, although their anchors are made of wood, and consequently much worse than those of the Dutch. To the southward and eastward is the right bank of the channel leading to the city; to the N. E. Nangasaky, to the N. and N. W. a part of the left bank of the channel of Nangasaky and the island of Kamino-sima. From the outer road to the center the depth decreases gradually from twenty-five to seventeen fathoms. In this passage the only thing to be observed is to keep closer to the Papenberg than to the opposite shore, and the former may be approached within a cable's length, as even at this distance there is a depth of eighteen or twenty fathoms. The Dutch ships, as they sailed out, kept nearer by half this distance.

N. E. of Papenberg lies, about three quarters of a mile distant, a small flat island entirely overgrown with wood, and bearing the name of Nosumi-sima (Rat island); it is about the same size as Papenberg, and a hundred and thirty fathoms farther, in the same direction, is the small bay of Kibatsch, in which there are from six to ten fathoms water. This, in all the harbour of Nangasaky, is the best place to refit a ship, for in the inner one the shore is every where so muddy that no ship can approach it. It was on the left side of this little bay that we were allowed a small space, scarcely longer than the ship itself, surrounded with bamboos, as a walk.

I would recommend to ships coming for the first time to Nangasaky not to suffer themselves to be detained by any Japanese boats which come out several miles to meet them, but to sail straight for the outer road. They may even run at once into the middle road, without the least danger, particularly during the south-west monsoon. The assistance of the Japanese in this passage is perfectly unnecessary; and by rejecting it they will avoid the unpleasant predicament of being kept two days in the middle of the entrance, where, if any thing of a storm were to spring up, they would be exposed to the greatest danger. Unless my advice be adopted, they must hire a hundred boats to tow them to Papenberg, when they will experience the additional mortification of losing a hundred fathoms of towing line, which the Japanese will cut off the moment they have carried them in.

From the middle to the inner road, or to the city of Nangasaky, the course lies N. E. 40° ; the distance is about two miles and one-third, and the depth decreases gradually from eighteen to five fathoms. Nearly half way, where the channel is not more than four hundred fathoms wide, are situated the imperial batteries, or the emperor's guard. These consist of a number of buildings, but without a single cannon, similar batteries being erected in different places along both shores; and indeed, as the breadth of the channel is not more than five hundred, and in some places only three hundred fathoms, it would be impossible to conquer the city of Nangasaky if the Japanese knew how to fortify it, though in its present state it is not more formidable than the most miserable fishing town in Europe. A single frigate, with a few fire ships, would destroy the whole

of Nangasaky in a few hours, notwithstanding its population, who could not possibly make any resistance. In the vicinity of the emperor's guard, on the right bank, there is a bay which was always full of small vessels, and where there is no doubt plenty of water for larger ships, and on both sides of the channel there are several similar bays. This one, owing to its romantic appearance, was very striking, and seemed to be the largest; but we were not allowed to examine any one of them.

The anchorage near Nangasaky is not so good as either in the middle or outer road, as the bottom is a very thin clay, besides that, as the south-west channel is here quite open to the sea, there is less shelter than when lying close under the Papenberg. The Nadeshda lay in five fathoms and a quarter, four hundred fathoms from Dezima, which bore N. E. 40° and two hundred and fifty from Megasaky, the residence of our ambassador, adjoining to the Chinese factory, some of the magazines of which were given up to us. Megasaky bore of the ship S. E. 80° .

The mean of a number of sets of observations to ascertain the latitude of Kibatsch and Megasaky reduced to the middle of the town according to the plan of the harbour, gave

	32° 44' 50" N.
The latitude of Kibatsch	32° 43' 15" S.
————— Megasaky	32° 44' 02"
————— the flag staff at Dezima	32° 44' 18"
————— Nangasaky	32° 43' 40"

The longitude is chiefly ascertained by distances from the moon, above 1000 of which were measured by Dr. Horner and myself during the first month of our stay here.

DESCRIPTION OF THE HARBOUR OF NANGASAKY. 305

The mean of 287 distances of the sun west from the moon, measured by myself, gave for the longitude of Kibatsch, $230^{\circ} 18' 1''$, 277 distances of the sun east of the moon, $230^{\circ} 02' 41''$. The mean of these 564 distances is $230^{\circ} 10' 21''$.

The mean of 204 distances of the sun, west from the moon, observed by Dr. Horner, $230^{\circ} 19'$. 260 distances of the sun, east from the moon, $230^{\circ} 2' 10''$.

The mean of the 464 distances, $230^{\circ} 10' 35''$.

The longitude of Kibatsch is therefore by a mean of 1028 distances, $230^{\circ} 10' 28''$ W.

The center of the town of Nangasaky lies east of Kibatsch $-2' 35''$.

The longitude of Nangasaky is therefore $230^{\circ} 7' 53''$, or in round numbers $230^{\circ} 8'$ W.

The longitude of the entrance of the harbour of Nangasaky is $230^{\circ} 13'$ W.

The mean of all our observations on the variation of the compass in the outer and middle road was $1^{\circ} 45' 36''$ W. The southern dip of the needle could not be observed, because our dipping needle was entirely destroyed by the violence of the typhon.

As we were prevented during the first three months of our stay here from quitting the ship, we were unable to make any observations on the tides, and our remarks are therefore confined to the months of January, February, March, and April; but these were made with the greatest accuracy, and without any considerable intervening space, under my particular superintendence, by the second pilot of the ship. In the last six weeks of our stay in particular these observations were conti-

nued without interruption during every hour of the day until dark, and frequently from eight to twelve times in the hour. As this was about the time of the equinox, those who are occupied with any theories upon this phenomenon may, perhaps, be able to draw some inferences not altogether unimportant from our observations, and it is only to be lamented that we were prevented from commencing them in the first months of our stay here. I know of no place where better observations may be made upon the tides than in the harbour of Nangasaky, not only because their changes are here very regular, but because the water is always very calm, and never agitated except by the most violent storms; and it is particularly to be wished that the Dutch, who have plenty of time for such occupations, would give a continued series of them.

I have always determined the time of the highest flood and lowest ebb by corresponding altitudes; and as I had several observations between each change, I could invariably take the mean of them. In the syzygies the time of the highest flood is at 7 *h.* 52' 41". Generally the highest flood and lowest ebb was on the third and fourth change after these and the quadratures. The highest tide we witnessed was on the 2d of April, two days after the new moon, when the horizontal parallax of the moon was 59' 48" and its declination 23° 13' N. The water rose 11 *f.* 5 *in.* the wind was moderate from the north. The lowest tide was on the 25th March, two days after the quadrature, three days after the apogee, and the same period after the equinox: the water on this day only rose 1 *f.* 2 *in.*; the wind blew gently from the northward.

Although this year was not remarkably favourable, yet the weather, during the three first months in particular, could not possibly be finer than it was here; a consequence, perhaps, of the typhon, which had entirely cleared the atmosphere. The following is in a few words the monthly state of the weather, which, as it was easily referred to, I set down at the end of every month.

OCTOBER, 1864.

The north-east trade wind, which set in with the typhon on the 1st of October, was the reigning wind during this month: now and then, indeed, it blew from the N. W. and twice from the W. and S. W. but only for a few hours. On the whole the weather was extremely fine, except on one day, the 24th, when the sky was overcast and it rained a couple of hours. The highest barometrical rise in clear weather with a gentle north-east wind was = 29 in. 99. The lowest in cloudy weather and a fresh wind from the S. W. = 29 in. 62; and the greatest degree of damp which the hygrometer* expressed under similar circumstances was 44, 0. The highest rise of the thermometer in the cabin was 10; the quicksilver, where it stood completely in the shade, rose at nine o'clock in the morning to 20° 2. The lowest stand of the thermometer was on the second morning at seven o'clock during a fresh wind from N. E. by E. when the quicksilver fell to 10° 4. Both hygrometer and thermometer experienced great changes daily. Even in the cabin the difference in the thermometer was frequently

* The hygrometer's highest degree of damp was 70° according to several experiments in the water. The highest degrees of dryness in the sun were 15° and 18°.

from four to five degrees, and in the shade upon deck, between six in the morning and noon, as much as nine and ten degrees. Until nine in the morning the bay was constantly covered with a thick mist, probably occasioned by the great transition from heat to cold.

NOVEMBER.

The wind was almost constantly between north and east. On the 4th November, three days after the new moon, we had a very hard storm from the south, with thunder and heavy rain. The wind shifted after noon from east to south-east and south, and held in this direction till midnight, when it suddenly veered to the north, and brought fine weather with it. A similar very violent south wind, accompanied with squalls, happened on the 13th November, three days after the full moon; and again on the 28th, three days after the new moon, we had another storm, with violent gusts of wind at east that lasted however only a few hours. The dew was as regular as in the preceding month, and so heavy that in the morning the deck was as wet as if it had been washed. I made an experiment one night, recollecting an old saying, to discover with a fine piece of muslin whether the dew had any colour, but did not perceive the smallest change in the stuff. The weather was throughout very sharp during this month, but we had often extremely hot weather; and the transition from heat to cold was particularly sudden. On the 13th, for instance, the thermometer stood at 10° of heat in the morning, 20° at noon, and at three o'clock in the afternoon, 24° in the shade. The next day at the same hour it was twelve degrees less, and the day after only eight degrees. In the morning at six and seven

o'clock it was rarely higher than 6° , very often only 4° and $4\frac{1}{2}^{\circ}$. The barometer generally stood very high; and was for nearly three days between 30 *in.* 25, and 30 *in.* 20; the wind at the time being very moderate at N. and the sky free from clouds. The lowest degree was during a strong south-east wind 29 *in.* 66. It only rained in stormy weather with the wind at south.

DECEMBER.

With the exception of the three last days of this month the weather was particularly fine, and it scarcely ever rained, unless on those days when the wind blew hard at south. The wind, except during a few hours when it blew from the south-west, was north-east, and towards the last days of the month the trade-wind set in, becoming more northerly, and even due N. or N. N. W., and so fresh and cold that the quicksilver fell to $+ 2^{\circ}$; and on the morning of the 27th, at eight o'clock, and during a perfect calm, even to $+ 1\frac{1}{2}^{\circ}$. The greatest height of the thermometer was on the 7th, when the quicksilver in the shade rose to 16° , the wind blowing pretty fresh at W. S. W. The barometer stood throughout the month uncommonly high, being seldom below 30 *in.* and frequently 30 *in.* 20. It was at the lowest on the 29th during a strong south-west wind, when in the course of eighteen hours it fell four lines to 29 *in.* 77. A thick fog, which continued until about nine o'clock, when it was dispersed by the sun, was, the same as in the preceding month, a sure forerunner of a fine day. There was never any fog with a southerly wind, and the changes in the hygrometer depended entirely upon them.

JANUARY, 1805.

The winter seemed to set in with the month of January, for the weather was now much more raw than before. The quicksilver fell on the 2d January for instance, during very clear weather, and a moderate wind at N. by E., to one degree below freezing point. On the 31st January, at five in the morning, it fell once more to $1\frac{1}{2}^{\circ}$ below freezing point; but about two in the afternoon it again rose to $13\frac{1}{2}^{\circ}$ in the shade, so that in nine hours there was a difference of 15° . The weather was particularly fine. These are the only two occasions on which the quicksilver fell below the freezing point, at other times its mean height, though it varied very much at different hours of the day, was at noon between 7° and 11° , and at six in the morning between 3° and 6° . The wind was mostly N. N. E. and N. N. W.; a S. W. and S. E. wind always brought storms and rain, and we had more frequently bad weather than before, not only during a southerly wind, as in the preceding month, but even with northerly winds. It only snowed once accompanied with hail, which was during a strong north wind, and the mountains remained for several hours covered with snow. We had only stormy and bad weather, as before, at the time of the new and full moon; but the heavy dew which fell so regularly in the preceding months, very seldom took place now, though it was always a precursor of fine weather, and it was at these times that the hygrometer marked the greatest degree of moisture, and even some degrees more than during a heavy and continued rain. The barometer was in general very high, and almost always above 30 *in.*

FEBRUARY.

This and January are the only two winter months, for towards the last days of February the air began to grow warmer, even with a northerly wind. The reigning winds were N. and N. N. W. which blew pretty fresh, and about the new and full moon were very violent. On the 15th, 16th, and 17th, we had a heavy storm at N. N. W. accompanied with snow and hail. The thermometer was half a degree below freezing point, and it rained several times, and with every wind. Although the northerly were the prevailing winds, gentle breezes from S. W. and W. S. W. were not uncommon, but were seldom of any duration. During the last days of the month the wind generally blew after noon very moderately for about an hour from the S. W. and W.: the barometer mostly stood above 30 *in.* but on the 26th February, during a continued rain, which was followed by a violent storm from the W. and S. W. it fell to 29 *in.* 67, and the wind had scarcely veered to its old quarter when the quicksilver again rose above 30 *in.* I have already stated what was the lowest degree of the thermometer; the highest in the open air, in the shade, was during a moderate south-east wind 15½, and once 15¼, but only towards noon. The same variations took place in the hygrometer as during the preceding months.

MARCH.

This was the most stormy month of any. The winds were as frequent from the S. W. as from N. E. and the former generally very violent. These south-west winds always brought continued rain; yet, from the report of the Japanese, the rainy season sets in with the south-west monsoon, which does not acquire all

its force until May. The rule, that it is mostly very stormy three days before and three days after the new and full moon, was particularly verified in this month. And two days after the equinox we had a very violent gale at S. and S. W. accompanied with squalls. The greatest storm that we witnessed at Nangasaky was on the 26th, five days after the equinox, and four after the new moon. Already in the night preceding the 26th, the wind was very high at S. W., but in the morning of that day it veered to S. E. and then shifted back between S. and S. W. and during this time the squalls were extremely heavy. Soon after mid-day this storm, which the Japanese called a typhon, abated, and calms and a fog that continued for three days, succeeded it. The barometer was, comparatively speaking, uncommonly high, viz. 29 *in.* 64; and yet on the 17th and 23d March, when the gale was more moderate, it was somewhat lower, viz. 29 *in.* 61. On the 1st October, 1804, it was nearly three inches lower. The mountains, which surrounded us, and indeed the vicinity of the land, may have contributed to this extraordinary height of the barometer, as in the harbour of St. Peter and St. Paul we remarked the same thing. The temperature of the air was very variable in this, as in the preceding months. The north, particularly when it succeeded a southerly wind, was always very raw and cold. The greatest height of the thermometer was on the 2d and 16th March, when the quicksilver in the shade rose to 16°. It was at the lowest on the 5th and 12th March, when it fell to + 2° and 1½°. On the 17th, during a heavy rain and strong wind from the S. W. the hygrometer marked a greater degree of moisture, viz. 55°, five higher than we had seen it until this day.

APRIL.

The N. E. monsoon was still at its height until the 18th April, the day of our departure from Nangasaky. The wind blew almost constantly from the N. and N. N. E. but mostly very moderate. On the night preceding the 5th, four days after the new moon, we had a violent storm from the N. N. E. with rain; but the next day the storm abated, and the weather again cleared up. On the last day of our stay here, the wind was particularly moderate, and the weather constantly fine. On the 18th April, four days after the new moon, we had a violent storm a few hours after we sailed which lasted nearly two days. This was followed by a calm for two more, and the barometer, which latterly was 30 *in.* and 2½ *lines*, began to fall. During the first days of this month the low state of the barometer was very striking, for it was not higher than 29 *in.* 40; less than it had been during the most violent storm we had experienced at Nangasaky. The wind was, however, very moderate at N. E. with a dark, clouded sky. The greatest height of the thermometer in this month was on the 4th, with a moderate breeze at N. E. and E. S. E., the quicksilver remaining during nearly the whole day at 20°, and on the 17th in a perfect calm it rose to 18° and 19°, from ten o'clock in the morning until six in the afternoon. The lowest state of the thermometer was on the 14th, at six in the morning, when it was not quite 6°. Its usual state was between 8° and 12°.

In Japan violent storms accompanied by heavy rain frequently arise during the month of June & July. Earthquakes are very frequent.

Governor's Residence May 40

OBSERVATION.

According to the remarks of the Japanese interpreters at Nangasaky, I have called the long flat island in the straits of Van Diemen (page 237) Jaconosima, and that to the S. W. of it, (page 238,) Tenegasima. But, in an original Japanese chart, in the possession of the Academy of Arts and Sciences, and in two others belonging to Counsellor Klaproth, the S. W. island is called Jaconosima, and the one to the N. E. Tenegasima. I have no hesitation in adopting the latter as the proper way of naming them, and have therefore done so in my chart.

END OF VOL. I.

at
of
of
t,
n
d
a.
of